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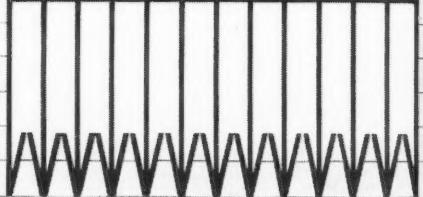
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Whither Medical Education?

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THE BEST PROPHETS, says a French proverb, are children and fools. Yet in sacred literature one finds that St. Paul advises us to "despise not prophesying." Obviously, it is the latter advice that gives me the moral courage to pry into the future and hazard a prophecy concerning medical education. As physicians you are fully aware of the dangers of prognostication and as time in its course unveils the years ahead, you may have good reason to respect the sagacity of French proverbs.

To assess the future with any degree of accuracy requires a knowledge of the present. Furthermore, a better understanding of the future lends intelligence to our present. Abraham Lincoln in his "A House Divided" speech given at the Republican Convention in 1858, said, "If we could first know where we are, and whither we are tending, we could then better judge what to do, and how to do it."

What are some of the major factors influencing medical education today? How will these factors relate to medical education of the future? Are there identifiable educational trends, currently in their infancy, that give promise of future maturation? Which of these trends should be nurtured and which discouraged?

It requires but a modicum of discernment to note that a ferment of change permeates medical educa-

tion today. The genesis of this change relates to a broad spectrum of facets so inextricably bound together as almost to defy separation—facets ranging from the explosive expansion of medical knowledge to the rapidly changing sociological atmosphere of our modern civilization; from the high cost of scientific education to the highly competitive market of faculty recruitment.

The sheer mass of recently discovered scientific knowledge presents a dual task, that of compiling an intelligent inventory of these new facts and, much more difficult, making this mounting volume of knowledge accessible and understandable.

The environment in which the medical graduate will function presents a moving sociological panorama. Among the more significant factors on this landscape are: a continuing emphasis on industrialization; the growing importance of suburbanization, with a migratory pattern leading away from both the concentrated metropolitan areas and isolated rural life; changing patterns of medical care as exemplified by the growing trend toward group practice; the rapid expansion of health insurance; and, finally, the mounting demands of an educated public for health services.

The quality of graduates from medical schools must never be compromised by demands for quantity, yet educators, now or in the future, cannot disregard their responsibility to produce an adequate supply of physicians. This responsibility probably is of greater concern to administrators of public institutions because of their more direct

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relationship with legislative bodies which are sensitive to public demands. Studies in this general area of supply and demand of medical personnel—fraught as they are with qualitative and quantitative variables and assumptions—usually receive but cool recognition from medical educators. And, when one adds to the above difficulties the political implications and notorious vagaries of statistical interpretations, the whole task becomes herculean. But, difficulty of accomplishment should not be a valid excuse for lack of action in an attempted solution of this particular problem.

While it is true that few are prepared to define a satisfactory physician-population ratio, projected estimates can be established with sufficient statistical worthiness to permit application of a variety of ratios within a generally acceptable range. Certainly, making an attempt to evaluate this problem, despite possible inaccuracies and the necessity for assumptions, is a more intelligent course of action than to take no action whatsoever.

Another problem that currently faces schools of medicine is the high cost of scientific education. Costs have become staggering. For example, the total anticipated operational budget for the 82 approved American medical schools, exclusive of research and hospital costs, is more than 130 million dollars a year. In comparison, the total income of all 155 schools of medicine in 1910 was less than the operating budget of one of our better-endowed schools of today.

Tuition fees in 1910 covered 70 per cent of the cost of medical education; today, less than 20 per cent. The average cost-per-year of training one student in 1920 was approximately \$500; today it is around \$4,500.

Reasons for this high cost of education are not difficult to determine. They all point to the simple fact of progress. The unprecedented advance in medical scientific knowledge in the last fifty years has required improved teaching methods with a highly competent faculty, expanding facilities and expensive equipment. In spite of these seemingly logical explanations, the cost factor still presents a desperate issue. Costs of medical education are different and are not duplicated in other scientific educational fields. To the extent that these costs are met, medical schools will have an opportunity to function adequately and efficiently.

It should surprise no one to learn that the market for scientific faculty continues to be highly competitive. Bidders for professional services are no longer limited primarily to university campuses or private practices, but now include the rapidly growing industrial interests. Industry, in many instances, offers an attractive, almost academic, atmosphere with

opportunities for varying amounts of unrestricted research and even teaching.

Before 1900, research played a minor role in the education of physicians. Today, it has become so essential an element of scientific education that it is responsible not only for advancing knowledge but also for recruiting outstanding scholars and faculty, men and women who thrive on the heady diet of exploration and discovery. One of the bonuses of a good research program is that students nurtured in its rich environment acquire a scientific maturity not observed in an atmosphere which is lean in research.

During the 1800's a person went to college to prepare for one of four traditional professions—the ministry, medicine, law or teaching. A hundred and fifty years ago 25 per cent of the college graduates became practicing physicians. This proportion today has dropped to two per cent. There are two major reasons for this proportional decline in the number of college graduates choosing medicine: The great increase in the proportion of youths attending college, and the development of many new professions closely allied to medicine.

Over the past 20 years, and particularly since the onset of the earth satellite era, medicine, as a profession, has encountered stiff competition from numerous scientific fields of interest whose intellectual challenge and social prestige have approached those of the physician. These competitive pressures are further compounded by the increasing demands on time and expense related to the period of medical education, particularly in the growing graduate or specialty programs.

The collective conscience of that portion of medicine within the academic fold, on occasion, suffers from a guilt complex related to graduate medical education. The point of sensitivity centers around the responsibility for education beyond the four undergraduate medical years. The phenomenal growth in specialty education during the past 20 years can be readily illustrated. Before the war in 1941, there were 5,256 approved residencies in all medical fields. After the war, in 1947, this number doubled to 10,422, and since then the figure has tripled to a total of around 30,000.

Willard Rappleye in addressing the Congress on Medical Education and Licensure in February of this year on the subject, "Major Changes in Medical Education During the Past Fifty Years," had this to say about clinical medical education:

"Usually the university is regarded as having the obligation for the preparation of physicians. Today it can meet only a portion of that duty. A substantial part of the clinical education of undergraduate medical students frequently is provided in other than

university hospitals. Two-thirds of the 12,626 approved internships and over one-half of the 31,665 residencies are in such hospitals. Although these appointments are primarily for training, the service features often are more prominent than the educational. The number of men and women in the internship and residency phases of present day overall medical education and services in both university and non-university hospitals is five times the number of graduates each year from the medical schools."

What should be the role of the medical school in the residency or specialty training program? What is the academic significance of board certification? In reality is this not another degree which certifies a level of education without necessarily granting any privileges of license or practice? Has academic medicine sold its graduate birthright for a mess of pottage?—the mess of pottage in this instance being a relinquishing of responsibilities by default.

Herman Pearse in a recent editorial in a surgical journal⁶ wrote: "The basic difficulty is that regulatory bodies have invaded the field of graduate surgical education despite the fact that they are not educational institutions. Residency training is not an exercise in manual dexterity, nor is it a trade school, but rather is graduate surgical education and, as such, belongs under the jurisdiction of the medical school."

Problems such as these are the daily bread upon which the medical educators of today must feed. There are no indications that the future bill of fare will be any more palatable.

Having taken a precursory glance at medical education of today and having established a base line of sorts, let us now with proper caution and respect open the door into tomorrow and attempt to identify some of the major patterns of the future on the basis of established trends of the present.

THE MEDICAL STUDENT

Ralph Waldo Emerson wrote that the secret of education lies in respecting the student. Certainly, there should be general agreement that the student stands at the very center of medical education. It is only as this concept is fully accepted by the faculty that teaching reaches its highest order. What, then, will be the role of the student in the future of medical education?

Let us explore two major aspects of the matriculant personnel pool of tomorrow in an attempt to determine the characteristics of the medical student of the future. These aspects relate to quality and quantity factors which are difficult to evaluate separately inasmuch as each is closely identified with the other. For example, other things being equal, the

greater the pool of applicants, the better the quality of matriculants. This is amply demonstrated in a comparative analysis of the college records of first year medical students in the class of 1950-1951 (when the number of applicants was 22,279) with those of the class of 1954-1955 (when the number of applicants reached a low of 14,538): The college grades of the former group were made up of 40 per cent A's, 43 per cent B's and 17 per cent C's, while the latter class averaged 16 per cent A's, 70 per cent B's and 14 per cent C's. In other words it appears as though the quality of the medical students of the future is related to the quantity of the applicants.

There is general agreement that the number of college graduates will more than double over the next fifteen years. The percentage of all college graduates entering medicine has decreased rather steadily, from 5 per cent in the early 1920's to 2 per cent during the 1950's. The medical school enrollment as a percentage of the total college enrollment for these same periods was 2.4 per cent and 1 per cent, respectively.

There is a dangerous complacency on the part of far too many medical educators concerning the applicant pool of students. While it is true that even conservative estimates of future college enrollments depict proportions that have been called "tidal waves," careful analysis of related qualifying factors gives cause for some degree of concern. The steadily decreasing proportion of college graduates entering medicine is not merely a relative figure distorted by the growing college population. In the year 1957 to 1958, the last year for which data are at present available, there was an absolute decrease in medical school applicants as compared with the preceding year. This occurred in spite of optimistic predictions based on increasing college enrollments.

Klinger and Gee⁴ in a report on the study of applicants to the medical school freshman class of 1957 to 1958 submitted the following conclusion:

"This 1957-58 applicant study may be characterized by three distinguishing features: a possible decrease in the relative attractiveness of medicine among the nation's college graduates; a change in applicant behavior in terms of application activity, with fewer repeat applicants and larger numbers of applications; and an increasingly apparent shift in the intellectual qualities of the applicant population as measured by MCAT [Medical College Admission Test] performance. All three features are undoubtedly correlated to some degree, but only the latter gives cause for immediate concern. If only MCAT science achievement scores were declining among applicants, it would suggest that students were simply emphasizing breadth in their premedical

preparation. The concomitant decline in quantitative learning ability scores, however, may indicate that medicine is attracting fewer students with the highest aptitude for scientific achievement. Insofar as clinical medicine can advance only as fast as the basic sciences on which it is based, this may reflect only a temporary shift in terms of the laws of supply and demand. But if the present shift continues to the point where the lowest echelon of accepted applicants becomes a group that is incapable of applying scientific advancement and methodology in the treatment of human illness, there will be cause for real alarm."

We cannot escape the fact that both new and old professions in scientific fields closely allied to medicine have created and will continue to create a highly competitive attraction for the students of the kind from which medical matriculants are and will be procured. The scientific professions are vying with each other for the more intelligent college student. This situation, compounded by factors such as the increasing cost and time of medical education as well as the demands for increased enrollment, places the school of medicine in an ever increasing competitive situation.

The medical schools of the future will not be likely to know the luxury of waiting for the better students to beat on their doors of admission. They must look forward to the grim and stark reality of active and painstaking recruitment for even the average applicant.

THE FACULTY

The evolution of American medical education has passed through three major developmental stages: First, and the least complicated, that of the preceptor apprentice association, before (and for a time after) the organization of formal schools of medicine; second, the proprietary schools with their faculties of practicing clinicians; and third, the university-affiliated schools with their core of full-time faculty recruited from both the basic science and the clinical disciplines. The faculties of the medical schools of today, playing the combined role of educator, researcher and administrator, present a versatile profile. Over fifty years ago William Osler⁵ appreciated the peculiar demands on the teacher in medicine when he stated, "The teacher's life should have three periods—study until 25, investigation until 40, profession until 60, at which age I would have him retired on double allowance."

Three clouds loom on the horizon of the future relating to the faculty of medical schools. Any of the three could hamper efforts to develop a medical faculty of the stature and proportion needed through the coming years. The three combined could crip-

ple the development of quality in medical education. The tragedy of this situation relates to the fact, not appreciated by many of our nation's leaders, that the quality of medical education and the health level of our nation are directly proportional.

President Logan Wilson⁷ of The University of Texas in a recent article on higher education described clearly and simply the first of these problems: "In the recent years of our greatest prosperity we have in effect been letting underpaid teachers subsidize the education of our children. This exploitation has now gone on to the point that new teachers cannot be recruited in sufficient numbers, and among those who are recruited the intellectual caliber is sometimes so inferior as to make a travesty of the complex and difficult task of fitting the oncoming generation for the world of tomorrow."

A philosophy of education which looks to the bargain basement for faculty recruitment will in general yield a product proportioned to the expenditure. The practical realism with which the Russians face the matter of teacher compensation should give us cause for thought. Behind the iron curtain the common laborer receives an equivalent average monthly income of \$125; the high school teacher \$300; the professional man, including the physician, the lawyer, and the engineer, \$400; and, in the leading universities, the professor's monthly salary ranges from \$1,500 to \$2,750. In Russia the income of the university professor is sixteen times that of the common laborer, whereas in America it is only two and a half times this amount.

The second cloud over the future pertains to the highly competitive external pressures placed on the faculty population. These pressures are compounded by the effects of the first cloud, namely, inadequate faculty compensation. In a civilization where the scientist is assuming an ever increasing role of national importance, competitive stress and demands are bound to increase proportionately.

The scientist with academic inclinations is forced to swim against a strong current of financial inducements. The attractions of the private practice of one's profession is a campus influence of long standing, but within recent years many other off campus activities have arisen to tempt the academician. Industry, appreciating certain fundamental attractions of the academic life, in many instances now offers the lure of periodic unrestricted research and even university affiliation. These trends are not presented here for criticism or condemnation but rather as a focus on the critical issue of faculty recruitment. The concept of plentiful and healthful "seed corn" is basic to the farmer's cornucopia. Similarly, the problem of faculty replacement and expansion is a matter of serious concern to medical

educators. This is the third cloud in the sky of the future. Although economic factors weigh heavy in this issue, there is reason to doubt that those factors are the only major ones involved. An evident weakness in the maturation of faculty "seed corn" lies in the very soil of its incubation, the medical school.

Before the cries of "heresy" drown out any further remarks on this unpleasant subject, let those who have the stability that permits constructive self-criticism, analyze the atmosphere of the average medical school of today in terms of potentials of faculty recruitment. Is the rigid curriculum and "lock-step" schedule conducive to interest in an academic future? Is there evidence of intelligent and active effort in the search for those students showing promise of good faculty material? What opportunities are there for a faculty prospect to step off the "conveyor belt" and mature for a period in the basic sciences?

In spite of the fact that the future of faculty recruitment looks somewhat dismal, it would seem proper for us as medical educators to desist from our wailing and gnashing of teeth long enough to set our own house in order. The development of a favorable atmosphere for the incubation of the faculty of tomorrow is something which for the most part is within our power to determine. True, some of the more cynical might point to the lack of adequate funds for scholarships or fellowships to effect such a program, but regardless of certain apparent limitations there is much that can be done to establish a proper ethos.

The solution of problems inherent in faculty recruitment, at present as well as in the future, will require the utilization of all of the resources at hand. This is, and will continue to be, one of the really critical areas in medical education. Even the most optimistic forecast must envisage a continuous struggle on all three fronts outlined in the preceding paragraphs. The price is high but the rewards justify the effort.

THE CURRICULUM

It is little wonder that the medical student, buried under a growing avalanche of scientific facts funnelled through a narrow and relatively fixed period of time, tends to exhaust himself filing bits of knowledge in the cabinet of his memory. The alchemy of the extraction of wisdom from knowledge is a process possessed by a select few.

The distinction between knowledge and wisdom is not merely an exercise in theoretical semantics, but actually is the very issue upon which our success as medical educators will be determined. William Cowper, with poetic understanding has focused on this matter in the following lines:

"Knowledge and wisdom, far from being one,
Have oft-times no connexion. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge, a rude unprofitable mass,
The mere materials with which wisdom builds,
Till smooth'd and squar'd and fitted to its place,
Does but encumber whom it seems t'enrich.
Knowledge is proud that it has learned so much
Wisdom is humble that he knows no more."

It has become quite the fashion in medical educational circles to revise curricula or to explore techniques of curricular reform. In many instances this activity gives a false sense of security, as though the acts of revision in themselves were indications of progress. Unfortunately, curricular reform for its own sake only increases the demands on the time of an already harassed faculty. Change of any kind develops strong opposition, even in institutions of higher learning. Someone has said that changing a curriculum has all of the public relations hazards and emotional overlays of moving a cemetery.

Curricular studies and revisions are nothing new in the history of medical education and several somewhat unorthodox and long range plans currently are being tested in the United States. Recent experimental approaches relate to the basic problems of curricular time and curricular content.

The matter of conservation of time has been approached from two vantage points—first, the utilization of the usual summer vacations with a resulting continuous class session, and second, the paring down of departmental hours to a bare minimum. Curricular content has been critically evaluated in the light of the increasing scope of medical science as well as the limitations of strict departmental boundaries and inefficient teaching techniques.

An immobile departmentalism can present a serious barrier to the correlation of the medical school curriculum. Correlation, under these terms of reference, works in two dimensions. On the one hand there is horizontal correlation between contemporary subjects such as anatomy and physiology, and on the other hand, a vertical correlation between sequential subjects such as anatomy and surgery. Such a consideration of subject material tends to accomplish two purposes; on the one hand, it decreases overlap and needless repetition and on the other hand it more readily permits a mental integration of diversified scientific facts. How efficient is it, for example, to study the structure of the stomach in the anatomy laboratory and then at a different time and place restudy the neuromuscular functions of this same organ in physiology and again the secretory functions in biochemistry? Many educators feel that this type of time conservation is essential in the light of the constant

expansion of scientific knowledge and a relatively fixed time of four years of medical undergraduate study.

Curricular time and content studies have not been limited to the medical school years alone but have been directed also to the premedical and graduate medical periods. Preparation for medicine is a continuous process extending from the grade school, through the secondary school and college on into the school of medicine and hospital. Thus, the saving of time or the improving of curricular content at any point along this entire academic schedule will, in the ultimate, achieve the desired result.

Many educators have criticized the growing tendency to require a baccalaureate degree for admittance to medical school and plead the cause of a three-year pre-medical program. These protagonists of a shorter period of college preparation present statistics showing better academic accomplishments by those accepted after three years in college. These statistics, however, are colored by the fact that the better student may venture to matriculate in medicine after three years, whereas the poorer student usually desires the stature of an additional year of college. Similarly, at the other end of the schedule of formal medical education there are those who feel that the graduate training period has been lengthened beyond need. Over the past twenty years for the most part the educational and service functions of the internship have been assumed by the senior medical student in his clinical clerkship. Thus, some would argue that the student graduating from medical school is prepared to enter directly into specialty graduate training. Beyond this, there is argument from some quarters that the residency training period itself could be shortened without compromise to the specialty in question.

By way of examples of current studies and experiments certain specific programs are cited. Each of these citations presents ingredients of time conservation as well as curricular revisions, although the particular emphases may not be of equal significance.

The University of Tennessee has adjusted its time schedule of undergraduate medical education to a period of three and one-fourth years. This is accomplished by the utilization of a quarter system wherein a new class is admitted every three months and similarly a class graduated every three months. The matriculating student proceeds through six quarters (18 months) on a regular schedule of classes followed by a nonscheduled quarter for the purpose of review for qualifying examinations before admittance to the clinical years. Following this, he continues through six quarters of clinical

training to graduation. In such a schedule every quarter of the year is identical, for each course must be taught each quarter. Maximal utilization of space and facilities is possible under this system. In order to function efficiently a schedule of this type requires more faculty.

During the war years the American schools of medicine voluntarily accepted a speeded up program somewhat similar in time to that of Tennessee, although under circumstances of faculty shortages and student motivations that seriously complicated the situation. There was almost unanimous agreement among medical educators that the emergency speeding up of medical education through World War II was detrimental to the high standards established in the pre-war era.

Many schools of medicine, to varying degrees, have placed the medical student in a continuous session at the completion of the sophomore year, utilizing the two summers thus available for clinical training. Scheduling of this type has been directed more toward the inclusion of additional training than toward a shortening of time. Parenthetically, in view of the fact that hospitals must function through the entire year, it is simpler and actually more convenient to place the clinical program on a 12-month basis. This is not necessarily true in the basic science years.

The School of Medicine at Western Reserve University in 1952 initiated an experiment in medical education primarily directed toward improving the techniques in teaching. In this program there has been a general de-emphasis of departmental boundaries with the establishment of teaching committees composed of members from representative departments. Correlation of subject material is emphasized and the selection of important educational principles is a responsibility of the teaching committee rather than the individual department. This experiment is related more to curricular content and teaching techniques than to a shortening of the overall educational period, the contention being that even though improvements in teaching eventually must relate to savings in time, the overwhelming growth in medical science will more than absorb any time thus saved.

Johns Hopkins University has inaugurated a revised program of medical education directed toward an attempted solution of three serious defects: the excessive number of years required to train a physician; the dichotomy which exists between the liberal arts and the medical sciences; and the decline of strength in the basic science departments of medical schools.

The plan will allow a limited number of students to matriculate in Johns Hopkins University School

of Medicine after the sophomore year in college and to participate in a medical curriculum scheduled over a five-year period.

Similarly, a selected number of junior students will be admitted to the medical school and in exceptional cases such students may be entered in the second year class. Students who have elected to remain four years in college, or who have taken graduate work, will continue to be admitted to the school of medicine and be placed in the appropriate classes. The program will permit those students selected for early admission to continue their college education after they have begun the study of medicine.

Another time-saving factor in this plan is the proposed absorption of the hospital internship year into the clinical clerkship training period of the senior medical student. Thus under optimum and select conditions a student may obtain his doctorate in medicine, including the equivalent training of one year's internship, all in a period of seven years after entrance into college, as compared to the more orthodox time sequence of nine years.

There is little doubt that experiments of today will modify the medical curricula of tomorrow. However, the changes in time and technique will not be as drastic as some would envision. In retrospect, one of the major curricular modifications over the past quarter century—the long blocks of formal clinical lectures were replaced by the utilization of small group bedside instruction—related to teaching techniques rather than the saving of time.

In hazarding a prophecy envisioning the medical school curriculum of tomorrow, it would appear that the technical changes will focus more in the basic science areas of instruction than in the clinical. Furthermore, in spite of the hue and cry for time saving devices, no revolutionary short-cut in medical education will be forthcoming.

The fundamental changes in curricular technique will focus on the relationship between knowledge and wisdom. The student increasingly will be taught to interpret facts, not as items to tax his overburdened memory, but rather as straws in the bricks of wisdom contributing to creative thought.

If one is faced with the problem of teaching the contents of a telephone book to an illiterate, two alternatives present themselves. Either the illiterate may memorize the names and associated numerals or learn to read. The former is a prodigious and fatiguing task requiring constant memorization to meet the demands of a growing and changing population, the latter uses a basic knowledge to master the vagaries of a mass of facts regardless of their qualitative or quantitative variations.

The future of the graduate training program

over the next two decades envisages certain basic changes. The rotating internship will be absorbed in part by the clinical years of the undergraduate curriculum, and in part by the residency program, particularly the general practice fraction. The straight internship, actually a misnomer, will become what it always has been, namely a part of a specialty training effort. Flexibility of schedule will permit residents to broaden their experience by participation in the educational programs of other than their own specialties.

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Certainly the medical educators on the campuses will have an increasing influence on specialty certification and eventually will draw the responsibility for this phase of graduate education into the academic fold. This is not to imply that all specialty training will be carried out in university hospitals, but rather that the medical schools in the future will accept a much broader responsibility in this area of education.

Before leaving the discussion of curricular problems, a final word of caution is in order. This relates to the tendency of fitting the student to the curriculum rather than making an effort to fit the curriculum to the student. The following story (author not known) warns of the tragic dangers of fitting all students into an academic mold:

Once upon a time the animals decided they must do something heroic to meet the problems of a "new world." So they organized a school. They adopted an activity curriculum consisting of running, climbing, swimming and flying. To make it easier to administer the curriculum, all the animals took all the subjects.

The duck was excellent in swimming, in fact better than his instructor; but he made only passing grades in flying and was very poor in running. Since he was slow in running, he had to stay after school and also drop swimming in order to practice running. This was kept up until his web feet were badly worn and he was only average in swimming. But average was acceptable in school, so nobody worried about that except the duck.

The rabbit started at the top of the class in running, but he had a nervous breakdown because of so much make-up work in swimming.

The squirrel was excellent in climbing until he developed frustration in the flying class, where his teacher made him start from the ground up instead of from the treetop down. He also developed "charlie horses" from overexertion and then got "C" in climbing and "D" in running.

The eagle was a problem child and was disciplined severely. In the climbing class he beat all

the others to the top of the tree, but he insisted on using his own way to get there.

At the end of the year an abnormal eel that could swim exceedingly well and also could run, climb, and fly a little, had the highest average and was valedictorian.

MEDICAL RESEARCH

Research in the medical sciences is the wonder child of this age, precocious to an extreme and the favorite of all. There is no indication whatsoever that the future decades will see any loss in either its precocity or popularity.

The Consultants to the Secretary of Health, Education and Welfare on Medical Research and Education, popularly known as the Bayne-Jones Committee, in their final report stated, "The Consultants believe it conservative to project total national medical research expenditures of \$900 million to \$1 billion per year by 1970, as compared with \$330 million in 1957." The committee added that "continuation and expansion of federal support for medical research and education seems inevitable."

It would appear, from present trends at least, that the future of research in medicine appears most promising. The only storm warnings in this area relate to certain indirect effects of a rapidly growing research program on the total picture of medical education.

In Holy Writ are recorded the following words: "For he that hath, to him shall be given: and he that hath not, from him shall be taken even that which he hath." This portion of scripture might well be a pertinent text for the discussion immediately to follow.

Paradoxical as it may seem, some schools of medicine are becoming research poor. The extra demands on the faculty and the budget now imposed by the burgeoning growth of research are detracting from the educational responsibilities of the institution. Truly, those that have are receiving and from those that have not is being taken! And yet a sudden withdrawal of all private and federal research grants would bankrupt American medical education. One of the most fascinating and intricate aspects of the medical school budget is that of exploring the ramifications of research funds. Varying fractions of individual faculty members, secretaries and janitors owe their economic allegiance to an equally variable source of research interests.

There has been much talk of "hard" and "soft" money in medical education, the former term relating to the dollars of the hard core budget and the latter to the less dependable grant money. Although the descriptions are valid to a degree, and

the dangers of budgeting too heavily with "soft" money still obvious, the passage of time and the continued consistencies of the grantors have tended to erase much of the difference between these two categories of funds.

In forecasting developments over the next several decades two changes are envisioned which will go a long way toward erasing existing inequities in the administration of research grants. One change will be the acceptance by the grantors of the responsibility for the actual cost of the overhead of research. The other much needed change will be the granting of research allocations over a five-year period in contrast to the year-to-year nature of present federal grants. These predicted changes will preserve and strengthen the operational budgets of medical schools as well as lend a long range stability currently lacking in many research projects.

Returning to another storm warning in the general area of research in the medical sciences affecting medical education in general, the problem was defined clearly in the Bayne-Jones Report as follows, "The projected rising demand for physicians engaged full-time in research will—as contrasted with the situation in the past—begin to absorb an appreciable proportion of the total output of M.D.s, and therefore make the total production of M.D.s a factor that must be weighed in projecting the nation's medical research effort." A slightly different facet of the same problem also was described in this report: "A major obstacle to the attainment of a well-rounded program of medical research and medical education for the nation as a whole is the fact that career opportunities in academic teaching and research, with respect both to salary and to the absolute number of positions, are inadequate." The projection of this problem into the future will be discussed later in this communication under the subject of supply and demand.

Question has been raised on the campuses of our institutions of higher learning as to the dangers of the large-scale support of committed or directed research. This query is not levelled at the dangers of a federal support *per se*. Experience has demonstrated in a rather convincing manner that the United States Public Health Service, with its committee system of evaluating projects, has been objective in the distribution of research funds. In spite of past fears, there has been little, if any, evidence of federal influence in the use of grants. Parenthetically, this is more than can be said for some areas of private support.

The real substance of the fear being discussed relates to the freedom of research effort in the face of a support restricted to established areas of investigation. Is the research scientist with other

inclinations and abilities forced into certain fields of research simply because funds are available for these specific projects? Dr. Conant,³ past president of Harvard, has spoken to this issue as follows: "The more uncommitted investigators the better . . . ;" [however], "forces tend to increase the emphasis on programmatic research. . . . But if it be true, as I believe history shows, that the significant revolutions, the germinal ideas, have come from the uncommitted investigator, then the present trend holds grave dangers for the future of science in the United States."

In a similar vein, Dr. Bronk,¹ past president of Johns Hopkins University, has stated, "There is a grave danger that the present demand by publicists, industrialists, and public administrators for large-scale scientific organization may impede progress."

Those responsible for financing medical education are in agreement that one of the serious budgetary handicaps is that of the relative size of restricted funds. This holds true for almost all fractions of institutional support including research, construction, instruction and maintenance. There is some evidence of a growing liberality in the thinking of those supporting medical education. With a growing enlightenment, the future support of "impractical" and unprogrammed medical research bodes well, or at least better than at present.

SUPPLY AND DEMAND

The matter of supply and demand of doctors poses a critical question today, for the future answer to this issue is dependent on the action of today. The substantial time lag between decision and ensuing results places the utmost urgency on the present.

There is a cleavage of opinion in medical circles concerning the needs for physicians in the future. In general, however, medical educators are unanimous in their opinion that substantially more graduates in medicine will be needed to cope with the predicted population growth.

As our annual population increase is approximately 3,000,000, by 1975, at the current rate of growth, there should be at least 230 million people in the United States. To maintain the present national ratio of physicians to population—1 to 730—we will need by then some 315,000 physicians. With our present census of approximately 225,000 physicians, and taking into consideration the attrition by death, the annual rate of increase of 3,500 doctors will supply approximately two-thirds of the need.

Dr. Vernon W. Lippard, dean of medicine at Yale, testifying recently to the need for increased

financial support for medical education, said that 22 new medical schools were needed merely to maintain our present physician-population ratio in the face of the predicted rise in population by 1975.

Dr. John B. Youmans, in his presidential address before the 68th Annual Meeting of the Association of American Medical Colleges in October of 1957, stated: "No general agreement exists as to the exact number of additional graduates in medicine required within the next decade or two, but there can be no doubt that the number must be increased. Whatever the number may be, it is greater than the medical schools in their present state can produce. Even the new medical schools that are planned or conceived will not produce the needed number and it takes years from planning to graduation."

Dr. Aims C. McGuiness, Special Health Assistant to Secretary Folsom, in addressing the June 1958 graduating class at The University of Texas Medical Branch, had this to say about the shortage of physicians: "Unless our society acts quickly to increase greatly its investment in medical education, we will be desperately short of physicians, technologists, and research scientists, and we will fail to grasp a large part of the opportunity we now have for the improvement of the health of the American people."

The recent Bayne-Jones Report, already alluded to in this paper, emphasizes that fourteen to twenty new medical schools are needed immediately to supply researchers as well as enough physicians to maintain the present physician-population ratio.

Unlike most professions, medicine lends itself to fairly accurate quantitative identification. A physician to be licensed must graduate from an approved school of medicine. Because most physicians remain active professionally throughout their lives, estimates of the current number of medical students and physicians are highly reliable. A simple, but not necessarily valid, appraisal of the adequacy of physicians is that of the physician-population ratio. Over the past thirty years there has been no remarkable change in the present national ratio of 1 to 730.

Fifty years ago a physician-population ratio carried greater significance as a measure of the availability of medical services to a community. Today, there are numerous variables which qualify the value of such a ratio, variables such as the ease of modern communication; development of competent paramedical professions; education of the American public; greater demands of medical research, industrial health, federal medicine, and health administration on the medical personnel pool; increased efficiency of the physician; the growing body of specialists, and many others.

The mere presence of any given number of physicians cannot assure a particular standard of medical care. The important factor in any evaluation of a physician-population ratio is that of professional quality. Not only is this a matter of individual proficiency but also of the correct distribution of particular skills. A plethora of specialists and a scarcity of general physicians might add up to an apparently adequate number of physicians and yet result in an inadequate medical service to a community.

No longer is the national demand for doctors related only to the matter of practicing physicians. Dr. James A. Shannon, Director of the National Institutes of Health, recently stated in an interview that the greatest single challenge to progress in American medical research today is the financial crisis of our schools of medicine. He added that if our research effort is to continue to grow, as the nation's needs demand, the educational system upon which it is based must be strengthened.

The question of enough physicians is not an easy one to answer. No simple mathematical formula has been developed that will determine accurately this nation's need for doctors. However, medical educators agree that our schools of medicine are not producing sufficient numbers of physicians to meet the national demands of the future. Certainly, one answer lies in the establishment of new medical schools.

In light of the critical struggles of established medical schools with their inadequate budgets, and the constantly rising costs of medical education, the immediate establishment of fourteen to twenty new schools of medicine would appear somewhat optimistic. Aside from the herculean task of the rather precipitous recruitment of a faculty, which probably would be accomplished at the expense of existing schools, each new school would require a capital investment estimated most conservatively at an average of some 25 million dollars.

Another approach advocated by some as a means of increasing the number of graduates in medicine, is that of increasing the current class size. Many educators believe that class size is closely related to the quantitative and qualitative adequacy of undergraduate medical education. Although there is no consensus among medical educators as to the optimum size of classes, most believe that the quality of education is compromised by classes exceeding 100 students.

Private schools of medicine are not susceptible to public pressures to increase enrollments as are state schools. Note the 1956-57 freshman class sizes of the following better-known private schools of medicine: Cornell, 84; Duke University, 78; Emory,

74; Harvard, 115; Johns Hopkins, 78; Stanford, 62; Washington University (St. Louis), 86; Western Reserve, 91; Vanderbilt, 54, and Yale, 80. The average freshman enrollment of all 78 approved four-year schools of medicine is 98; the average for the 42 private medical schools is 93, that for the 36 state schools is 105.

The logic behind limiting class size is that medical education is graduate education and does not lend itself to mass production. Research is an integral part of this form of education and as such cannot be handled in large group assignments but rather through the medium of small units. Similarly, clinical instruction at a patient's bedside requires a close faculty-student relationship of the preceptor variety.

It is not easy to refute the arguments of those who would remove limitations on class size and attempt to double enrollment merely by doubling faculty and facilities. The qualitative educational results of a quantitative manipulation of this type are extremely difficult to assess. How does one determine the professional efficiency of a graduate in medicine? (At what time in his career should this determination be made?) In general, however, medical educators believe that the quality of instruction is sacrificed by large classes. Their belief is attested by the fact that the ten well-known private medical schools listed above have an average freshman class of only 80 students, while the average of all 42 of the private schools is 93 students.

What, then, does the future portend concerning the supply and demand for physicians? It appears quite certain that there will be a decrease in the practicing physician-population ratio. Factors contributing to this situation are: the inability of medical schools to keep up with the population growth of the nation, and the increasing demands on the graduating classes for physicians not directly engaged in the practice of medicine.

THE BUDGET

As disagreeable as a discussion of the budget may be to many, nevertheless an appreciation of certain fundamental aspects of the financing of medical education is essential to an understanding of the future. Some of the relationships of the budget to particular facets of the medical school already have been broached in discussions of the faculty and research.

The first statement of fact is that medical education in this nation, as never before in her history, faces an extreme and critical financial crisis. The staggering costs of scientific education have passed the point of conventional support and demand an immediate and drastic remedy. Many would-be specialists in medical education have been offering ad-

vice, particularly what not to do, but in spite of this as well as many good intentions, the response has not been substantial.

Dr. Lowell T. Coggeshall, in his presidential address before the 69th Annual Meeting of the Association of American Medical Colleges in 1958, submitted a possible solution to this financial dilemma. Coming from one who has spent a lifetime in medical education as well as having served as a ranking official in the Department of Health, Education, and Welfare, this recommendation should be given careful consideration. Dr. Coggeshall, in discussing federal support of medical education, had this to say: "To me, these and related questions require an unequivocal answer. After carefully considering the problem for a number of years, may I say that the time for direct federal operational funds, free from any implications of subterfuge, has arrived. Indeed, it is overdue. Such funds should be provided, and I am confident that provisions can be enacted which will result in their intelligent and prudent usage, and without federal control."

One of the major functions of the federal government is that of the assumption of responsibility for essential functions which the local governments and peoples cannot discharge. Evidence is accumulating rapidly which would indicate that medical education falls in this category. Actually, the federal government has been supporting research and the construction of facilities in our schools of medicine, both state-owned and private. Dr. Coggeshall has placed his finger on the issue which will influence more than any other single factor the continued growth of American medicine. This is the very mundane item of an adequate operational budget, the poor stepchild of the academic budgetary household lost amidst the glitter of buildings and the glamor of research.

Bronze plaques commemorating donors are easily fitted on the substance of buildings and names lend themselves rather artistically to the granite cornerstones of research institutes. But rare is the donor with either the foresight or the humility to support the hearthstone of medical education with unrestricted operational funds.

Scrutiny of the budgets of the future will elicit an increasing concern in the matter of cost accounting. This will come as a result of the growing interest of the donor in the exact functions of a gift as well as of the interest of the medical school in a more efficient accounting of funds.

A lack of uniformity in cost accounting has led to considerable confusion on the part of medical schools in their allocation of the cost of medical education. The variety and complexity of medical college organizations and functions have not simplified budget comparisons. This problem is ex-

pressed simply and clearly in an excerpt from a recent survey by the State University of New York on the Study of Medical Education Costs:²

"Let us say that you and your neighbor have bought identical new automobiles. You paid \$4,000 for yours; your neighbor uses his car for business purposes so he paid \$3,000, and his company paid an additional \$1,000. If he told you that his car cost \$3,000, would this be the correct cost or would it provide an appropriate cost comparison?

"This is an illustration of what is happening in medical education. The total costs of medical college programs often are not paid in full by the college, and the proportion of the total cost which is paid by others varies in nearly every instance. The point is that 'medical college expenditures' are not necessarily 'medical college costs.' A simple comparison of expenditures will be of limited value to management.

"We need 'medical college costs' that will give us a picture of the total values being invested in medical college programs—the total amount required to run a medical college. There, 'medical college costs,' first of all, must be complete. If they are to be appropriate for comparative purposes, there is another essential requirement: they must represent an identical combination of cost factors for each college.

"Let us say that you and your neighbor have purchased new cars of the same year, make and model. However, each has a different combination of optional extra-cost features. If we wish to compare costs to see whether or not you have made a 'good buy,' we shall have to deduct the price of certain optional features to get an identical combination of cost factors for each car. This illustrates what needs to be done to develop properly comparable 'medical college costs.'"

An editorial in the November 16, 1957 issue of the *Journal of the American Medical Association*, entitled "Cost of Medical School Activities," reads in part: ". . . most often the expenses of supporting the complex activities of a medical school and its faculty are interpreted as reflecting solely the cost of educating medical students. There is very little awareness on the part of the general public and incomplete awareness by the profession itself that many of the expensive undertakings of medical schools are not directed solely and often not primarily to undergraduate medical students."

Emory University and the State University of New York have made an analysis of their operating costs in medical education for the academic year 1954-55. This analysis, showing a surprising degree of similarity in the percentage distribution of costs, also points up some of the major areas of medical school responsibility. In these studies,

approximately one-third of the operating costs are directly related to undergraduate medical education, approximately one-third to research and the remaining third to hospital services, graduate and postgraduate education.

Although good cost accounting practices dictate the accurate determination of budget distribution, one cannot assume from these studies that the cost of research and hospital service is unrelated to undergraduate medical education. Any school of medicine that limited its budget strictly to the actual cost of undergraduate education alone would soon fade into mediocrity.

Another essential responsibility of formal medical education relates to the graduate or residency training program. Not only is this continuing the education of a medical student, but also in this capacity the graduate resident contributes substantially to the clinical training of the undergraduate student. The medical colleges, to varying degrees, also carry on educational programs in nursing and other health related sciences.

In view of these broad and varied responsibilities, the accuracy of the total budget of a medical school cannot be determined merely by multiplying the medical student enrollment by the estimated cost-per-undergraduate-student. To understand the operational cost of a medical school, it is necessary to inventory the many facets of its activity, such as those related to undergraduate, graduate and paramedical education, as well as research and patient service. In other words, medical college expenditures are not necessarily medical college costs. This is an area which will receive considerable attention through the coming years.

CONCLUSION

Possibly this prognostication on the future of medical education has seemed unduly weighted with pessimism. Such has not been the intention of the author. In planning a campaign, one highlights the obstacles to be overcome. Correct therapy demands an accurate evaluation of dangerous symptoms.

American medical education has come a long ways during the past half century. During these past decades serious and critical crises have been met and overcome. The future, although presenting many substantial hurdles, holds no insurmountable problems. The ability to initiate and profit by constructive self-criticism is evidence of stable maturity. Let us in medical education give heed to the prophetic challenge, written in the *Book of Proverbs*, and echoed down through the centuries, "Where there is no vision, the people perish."

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Formation, Structure and Function of Cartilage

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WITHIN THE PAST DECADE, the literature pertaining to the chemical and physiologic features and the growth of cartilage has become voluminous and highly revealing. The increased activity in research has been due in large measure to the availability of research tools and methods not previously known, among them electron microscopy, radioisotope techniques, improved histochemical techniques and improved macrochemical and microchemical analytic and synthetic methods.

It is the purpose of this communication briefly to summarize some of the significant contributions resulting from these improved research methods during the past decade and to indicate the possible clinical importance in the fields of arthritis, cartilaginous tumors, congenital and growth deformities and, in particular, in the consideration of transplantation of hyaline cartilage.

Carbohydrate Metabolism

The presence of large quantities of glycogen in the cytoplasm of cartilage cells was first described by Rouget³⁰ in 1859. His observation has been a factor in many theories including the following:

1. Glycogen derivatives through phosphorylation and transphosphorylation provide the substrates for phosphate esters utilized in calcification (Gutman and Yü).²¹

2. Glycogen, through its carbohydrate breakdown products, is a precursor of chondroitin sulfate in cartilage matrix (Zambotti).³⁵

3. Glycolysis and the aerobic metabolism of carbohydrate may provide energy necessary for synthetic functions involved in the formation of collagen and of new bone at the epiphyseal line (Harper).²²

Recent observations indicate that glycogen in cartilage is involved in all these functions and perhaps in others still to be discovered. The author's own observations recently presented⁴ indicate that when rapidly growing cartilage is deprived of the normally available amount of glucose, the quantity of matrix formed about each cartilage cell is greatly reduced.

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• Improved investigative techniques including electron microscopy, isotope tracings and improved histochemistry have greatly increased knowledge of the function of cartilage as a body tissue. Highly complex and delicate enzyme systems contained in the cartilage cell are involved in cartilage matrix formation and in the processes of calcification and cartilage repair. Heat, various drugs, freezing, and changes in the chemical environment damage or destroy these enzyme systems and interfere with the growth and function of cartilage. Hyaline cartilage to be transplanted must be handled with great care to preserve the cellular enzyme systems—otherwise the graft will be resorbed and clinical failure will result.

Almost every enzyme involved in the process of anaerobic and aerobic glycogen metabolism has been detected in cartilage by various investigators (Table 1).

There is indirect evidence that other enzymes in the glycolytic cycles are also present in cartilage. Blocking experiments have indicated that triosephosphate isomerase and phosphoglyceromutase (triose mutase) are present in addition to those enzymes already identified.

The establishment of the presence of glycolysis in cartilage provides foundation for the assumption that glycogen is involved in the production of phosphate esters needed for calcification. It has been further shown by Gutman and Yü that calcification in cartilage cannot proceed when the glycolytic enzymes are inhibited.

An interesting sidelight of considerable importance is the demonstration by Tulpule and Patwardhan³³ that vitamin D is necessary in epiphyseal cartilage to facilitate the Krebs cycle oxidation of pyruvates. This indicates that vitamin D deficiency may actually operate by retardation of one or more steps in aerobic glycolysis, thus preventing the formation of substances essential for calcification.

Production of energy is a direct result of glycolysis, and of oxidation of carbohydrate in the Krebs cycle. These reactions take place in cartilage. It is not yet known how this energy is utilized.

Synthesis of Chondroitin Sulfate and Sulfate Exchange in Cartilage

Chondroitin sulfate (Chart 1) is the principal carbohydrate component of cartilage matrix. It

TABLE 1.—Glycolytic Enzymes Present in Epiphyseal Cartilage

| Enzyme | Reference |
|-------------------------------|---|
| Glycogen phosphorylase | Gutman and Gutman (1941) ²⁰ Cobb (1953) ¹² |
| Hexokinase | Gutman and Yü (1950) ²¹ |
| Phosphohexose-isomerase | Albaum, Hirschfeld and Sobel (1952) ¹ |
| Phosphohexose kinase | Albaum, Hirschfeld and Sobel (1952) ¹ |
| Aldolase | Albaum, Hirschfeld and Sobel (1952) ¹ |
| Triosephosphate dehydrogenase | Albaum, Hirschfeld and Sobel (1952) ¹ |
| Enolase | Albaum, Hirschfeld and Sobel (1952) ¹ |
| Lactic acid dehydrogenase | Albaum, Hirschfeld and Sobel (1952) ¹ |
| Citrogenase | Dixon and Perkins (1952) ¹⁵ |
| Aconitase | Dixon and Perkins (1952) ¹⁵ |
| Isocitric dehydrogenase | Dixon and Perkins (1952) ¹⁵ Follis and Melanotte (1956) ¹⁸ |
| Cocarboxylase | Zambotti and Lorenzi (1953) ³⁴ |
| Coenzyme-A—DPN—dehydrogenase | Albaum et al. (1952) |
| Succinic acid dehydrogenase | Follis (1949) ¹⁷ Castellani and Zambotti (1954) ⁹ Follis and Melanotte (1956) |
| Malic-dehydrogenase | Follis and Melanotte (1956) |

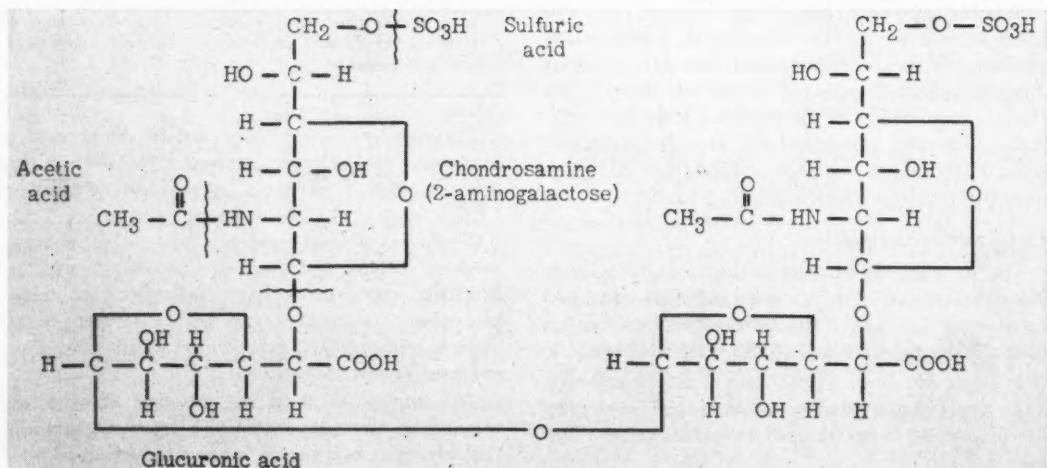


Chart 1.—Chondroitin sulfate acid.

is composed of alternating units of sulfated acetyl-galactosamine and glucuronic acid.¹⁴ It occurs polymerized to a molecular weight varying between 100,000 and 2,600,000.

Approximately 10 per cent of chondroitin sulfate occurs as a free substance; the remainder is linked to protein. This protein is partly collagen and partly other nonperiodic and nonfibrous proteins. The nature of the bonds between chondroitin sulfate and protein are of importance because the strength and resiliency of cartilage appears to be directly related to the integrity of this bond. Cartilage becomes soft and loses its normal structure when treated with the enzymes trypsin and papain which destroy protein, or with hyaluronidase which hydrolyzes chondroitin sulfate.

Meyer,²⁵ who intensively studied cartilage proteins and their linkages, concluded that linkages of

several types are probably present between matrix proteins and polysaccharides, but that salt linkages predominate. Such bonds are subject to cleavage by enzymes and by changes in hydrogen ion concentration.

Chondroitin sulfate is present especially in the immediate vicinity of the cartilage cell. This suggests that the cartilage cell is responsible for the production of chondroitin sulfate either by direct synthesis or by alteration of the surrounding tissue fluids in such a way as to bring about the deposition of chondroitin sulfate.

Evidence has rapidly accumulated to show that all the enzyme systems necessary for the synthesis of chondroitin sulfate are present in the cartilage cell and that these enzymes are more active in rapidly growing epiphyseal cartilage than in resting cartilage.

Castellani and Zambotti¹⁰ in 1956 reported the presence of a thermolabile enzyme system in epiphyseal cartilage which catalyzes the synthesis of hexosamine from glutamine and glucose 6-phosphate. This process is ten times more active in epiphyseal than in tracheal or costal cartilage.

The synthesis of the glucuronic acid portion of chondroitin sulfate in cartilage was reported by Castellani in 1957.¹¹ This process involves the dehydrogenation of uridine-diphosphoglucose (UDP glucose) to uridine-diphosphoglucuronic acid (UDP glucuronic acid) in the presence of oxidized diphosphopyridine nucleotide (DPN). The UDP glucuronic acid is later split to UDP and glucuronic acid or conjugated with sulfated UDP-galactosamine to form the chondroitin sulfate molecule.

The various steps in the enzymatic synthesis of chondroitin sulfate from glycogen have been postulated by Zambotti and are set forth in Chart 2. This is slightly modified from a similar scheme published by Roden²⁰ in 1956.

Reactions 1, 2, 3 and 4 (Chart 2) are glycolytic cycle steps. Reaction 5 has been established by Castellani and Zambotti and 5a by Leloir and Cardini.²³ Reactions 7 and 8 were determined by Boström and Månnsson⁶ and by Brown⁸ in 1953. Reactions 9 and 10, and 12 to 15 are concerned with uridine nucleotide and coenzyme transfers, several of which have been observed in cartilage and others observed by Glaser and Brown¹⁹ in the synthesis of hyaluronic acid.

The exact mechanisms of sulfate fixation (reactions 11 and 12) are not entirely clear. The fact that fresh cartilage combines sulfate has been amply shown by Pelc,²⁸ Dzieciatkowski,¹⁶ Boström and Månnsson,⁷ and Amprino.³

In this connection, the work of Boström and Månnsson is of interest, as they studied with great detail the effects of many factors on the enzyme system responsible for the incorporation of labeled sulfate into chondroitin sulfuric acid.

Under carefully controlled experimental conditions they were able to determine the characteristics of the enzyme system involved in the sulfate incorporation into bovine nasal and costal cartilage. Briefly, the uptake of S^{35} -labeled sulfate by bovine cartilage is catalyzed by an enzyme system which is oxygen-dependent, temperature-dependent, and is destroyed by freezing and thawing, by heating, by damage to the cartilage cell and by enzyme inhibitors, especially the heavy metals (Table 2).

Amprino and Bélanger⁵ showed that radioactive sulfur accumulates first in the cartilage cell, then in the matrix, suggesting again the direct synthesis of chondroitin sulfate by the cartilage cell.

The content of chondroitin sulfate in articular

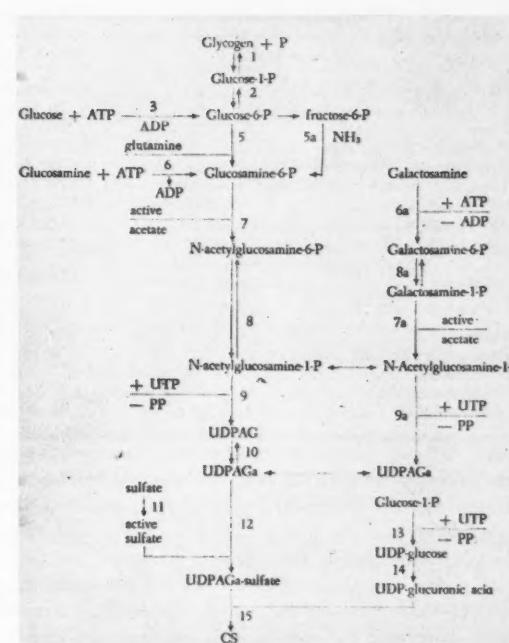


Chart 2.—Possible pathways for the biosynthesis of chondroitin sulfate.

P = phosphate
 PP = pyrophosphate
 ATP = adenosintriphosphate
 ADP = adenosindiphosphate
 UTP = uridintriphosphate
 CS = chondroitin sulfate (or chondroitin sulfuric acid)

UDP = uridindiphosphate
 $UDPAG$ = uridindiphosphate-acetyl-glucosamine
 $UDPAGa$ = uridindiphosphate-acetyl-galactosamine

cartilage in humans has been found to diminish with advancing age and with degenerative joint disease.^{24,24a} Under normal conditions the chondroitin sulfate content is higher in weight-bearing cartilage than in the upper extremities.

Amprino also showed that the radiosulfate once incorporated in skeletal cartilage in animals is not always permanently fixed but may be resorbed and incorporated in other areas of cartilage or even in the bone salt, emphasizing the fact that there is an active turnover of chondroitin sulfate in cartilage tissue. Even in fully differentiated cartilage, renewal of chondroitin sulfate in the matrix seems to occur.

Clinical Applications

It is not within the scope of this communication to discuss in detail the clinical implications of the recent advances in knowledge of the chemical features and function of cartilage, yet certain observations may be of some value.

In trauma to joints and in arthritis the preservation of healthy articular cartilage is of prime importance. Since cartilage is not static, but is in a constant state of metabolic activity concerned with

TABLE 2.—Characteristics of Cartilage Sulfatase Enzyme System (Boström and Männson)

| Agent or Process | Effect of $S^{35}O_4$ Uptake by Chondroitin Sulfate of Cartilage |
|--|--|
| Homogenization of cartilage..... | Reduced uptake by 67 to 93 per cent |
| Absence of O_2 in the atmosphere..... | Reduced uptake by 64 per cent |
| Increasing temperature..... | 100 per cent loss of uptake above 47° C. |
| Decreasing temperature..... | 50 per cent loss at 21° C.; 100 per cent loss at 0° C. |
| Freezing and thawing of cartilage..... | 100 per cent loss of uptake after freezing and thawing |
| Time after removal of cartilage from body..... | No loss up to 4 hours. Marked loss in 24-48 hours; total loss after 4 days. |
| Incubation time..... | Uptake most rapid in first 2 hours; tapers off after 10 hours |
| Age of animal..... | Uptake in 1-day-old calf 100 per cent 2-year-old cow 57 per cent 12-year-old cow 26 per cent |
| Inhibitors..... | Iodoacetate—100 per cent inhibition in low concentration Mercurials—100 per cent inhibition in low concentration Arsenicals—100 per cent inhibition in low concentration |
| Penicillin..... | No loss at $10^{-3}M/1$ concentrations |
| Para-amino benzoic acid..... | No loss at $10^{-3}M/1$ concentrations |
| Sodium benzoate..... | No loss at $10^{-3}M/1$ concentrations |
| Cortisone alcohol..... | 30 per cent loss at 10^{-3} and $10^{-4}M/1$ concentrations |
| Salicylic acid..... | 30 per cent loss at 10^{-3} and $10^{-4}M/1$ concentrations |

maintaining its matrix, any condition or treatment which will be detrimental to the cartilage enzyme systems or to the matrix itself may damage the cartilage and defeat the primary purpose.

The indiscriminate use of hyaluronidase about articular structures or the use of proteolytic enzymes such as trypsin for reduction of swelling and fibrosis, while these have not been thoroughly studied, could conceivably produce harmful results. The injection of mercurials into joints results in the rapid destruction of articular cartilage. The long-term effects of the use of cortisone derivatives in diarthrodial joints is not known, and one may only guess at what effect many other drugs may have on the delicate enzyme systems concerned with the formation and maintenance of cartilage matrix.

With regard to cartilaginous tumors, very little can be said positively. Schajowicz and Cabrini^{31,32} studied some of the histochemical alterations in chondromas and chondrosarcomas. The studies were very limited in scope, but they demonstrated the value of histochemical observations in understanding these neoplasms. It is hoped that further studies of the metabolism of abnormal cartilage tissue may broaden knowledge of these tumors and lead to new and effective methods of treatment.

Much has been written and much work has been done on metabolic considerations relating to congenital skeletal abnormalities. It is well established that agents that interfere with the glycolytic cycle (such as insulin, cortisone, sulfonamides and heavy metals) will produce congenital deformity in experimental animals. In humans, diabetes, vitamin deficiencies and starvation are statistically proven causes of stillbirths and of congenital deformities of the skeleton. It would appear that alterations in the embryonic circulation which are disadvantageous to the function of the cartilaginous enzyme systems during the period of chondrification and

rapid cartilage growth of the embryo (in the period between the seventh and twelfth weeks of gestation) will interfere with formation of the skeletal cartilaginous anlagen and cause permanent defects and deformities.

Of possibly more direct concern to orthopedic surgeons are the implications of these findings on the use of cartilage as a transplantable tissue.

As recently as November, 1958, Allbrook and Kirkaldy-Willis² reported the use of preserved whale cartilage and of fixed decalcified autogenous and homogenous cartilage implants in the elbow joints of monkeys after radial head resection. It is not surprising that all these cartilage grafts were resorbed. The cartilage in this experiment was obviously unsuited for survival and its resorption was certain. This does not mean that all transplanted hyaline cartilage must undergo rapid resorption and replacement.

In July of 1958, Craigmyle¹³ reported on long term cartilage grafts in rabbits. Two years after transplantation of fresh rib cartilage into subcutaneous tissue and muscle, heterogenous grafts were resorbed but autografts and homografts were found to have survived, the cartilage cells were still viable and the matrix still showed metachromasia and active S^{35} uptake—equal to that of nontransplanted fresh cartilage controls.

In cartilage transplantation one of two results is desired: Either that the transplanted cartilage will live and function, or that the host tissues will, by metaplasia, form new cartilaginous surfaces as a result of the "inductive" forces of the transplant. There is ample evidence that viable cartilage will live and grow in other than its original position. This is seen in osteochondritis dissecans, in osteochondromata and in the case of the loose bodies in arthritis and following articular cartilage trauma. The case for the induction of cartilaginous meta-

plasia is not as strong, although this is observed in fracture callus, in synovial osteochondromatosis and in rare extra-skeletal cartilaginous tumors such as that recently reported by Murphy and Wilson.²⁷

The factors responsible for cartilaginous metaplasia are poorly understood. On the other hand, the factors necessary for survival and function of cartilage grafts may now be stated with some certainty. From the information at hand, we may set down a theoretical list of rules for successful transposition of hyaline cartilage:

- a. Heterogenous cartilage will not survive.
- b. Autogenous cartilage is probably preferable to homogenous grafts.
- c. Cartilage to be transplanted must not be subjected to freezing, nor to temperatures above 45° C.
- d. Preservation of cartilage in strong antiseptic solutions is not permissible.
- e. The graft should be used within a few hours of the time of its removal from the donor site.
- f. The host tissues should be free of excessive trauma, hemorrhage and infection to permit adjustment of the graft to the host site with a minimum of alteration of chemical and cellular environment.

If the enzymes necessary for the formation of cartilage matrix are destroyed in the process of transplantation, or if the host environment is unfavorable for the function of these cellular enzyme systems, then the transplant will not survive in a healthy condition.

Clinical records are available of cases of cartilage grafts and transplants carried out in accordance with the theoretically derived rules listed above, and they bear out the validity of these dicta. Since 1938, J. R. Moore²⁶ of Philadelphia has employed the "cartilaginous cup arthroplasty" for ununited fractures of the neck of the femur, using fresh autogenous grafts of hyaline cartilage. Histological examination of a cartilage graft nine years after operation revealed the hyaline cartilage to be viable and to all appearances normal and basophilic. Other similar examples of completely successful transplantation of fresh autogenous hyaline cartilage are numerous. Moore still uses the cartilage cup arthroplasty after 20 years, and results in many cases are strikingly good. This appears to be an instance of the laboratory men's finally catching up with an outstanding clinician and surgeon to find belatedly that he has been doing the right thing all along.

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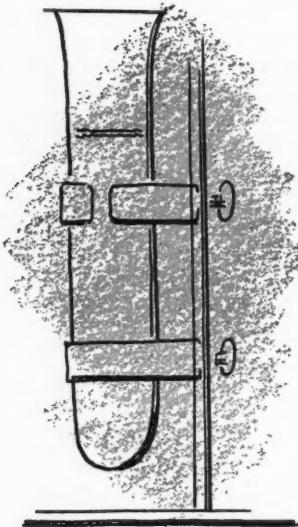
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Heparin in Acute Myocardial Infarction

Observations Indicating the Potential Advantages of Using It As the Sole Anticoagulant in Therapy

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DURING THE PAST FEW YEARS a large body of evidence has accumulated that suggests that heparin would be superior to all oral anticoagulant drugs in the therapy of acute myocardial infarction. It appears from the literature that surgeons, more than internists and cardiologists, have been aware of the advantages of heparin. De Takats⁷ said that "the treatment of choice in acute thromboembolic disease is by heparin."

The present communication will outline the experimental findings of others supporting this point of view, will summarize the author's own data indicating improved tissue and myocardial oxygenation after injection of heparin in atherosclerotic patients, and finally will present clinical experiences with administering heparin for three to four weeks as the sole anticoagulant in therapy of acute myocardial infarction. In keeping with this concept was Nichol's²⁵ report that he and his co-workers had the clinical impression that the longer heparin was continued in therapy of myocardial infarction before oral anticoagulants were given, the better were the results.

As an anticoagulant, heparin has many advantages over prothrombin depressing drugs. It is a physiologic substance with a wide margin of safety whereas oral anticoagulants act by poisoning the liver. Heparin acts immediately and is the only anticoagulant which specifically delays clotting. There are few contraindications to its use, and it is rapidly neutralized by protamine sulfate, polybrene or whole blood. Furthermore there is ample evidence that heparin is a more efficient anticoagulant than coumarin drugs. In studies of intravascular coagulation in dogs Wessler³⁰ noted that heparin, when given so that clotting times were increased to twice those of the controls, effectively prevented clot formation whereas Dicumarol did not unless prothrombin times were dangerously depressed to 1 to 2 per cent of normal. When thromboplastin, which normally initiates clotting, is added to heparinized blood, for-

- There is a considerable body of experimental evidence that heparin is superior as an anticoagulant to any prothrombin depressing drugs. Furthermore its lipemia-clearing action affords other benefits which result from the removal of fat from the bloodstream. Important among these beneficial effects is the increased tissue and myocardial oxygen consumption which results from the injection of heparin in atherosclerotic patients.

Because of these advantages of heparin over oral anticoagulants, the use of heparin as the sole anticoagulant for three weeks in patients with severe acute myocardial infarction was evaluated as opposed to the customary therapy where heparin is given for several days and then oral anticoagulants are used. The mortality in the dicumarin treated group was 38 per cent, as compared with 28 per cent in the patients who received only heparin for three weeks.

mation of clots is prevented more efficiently than when it is added to dicumarolized blood.²⁹ Heparin, since it is an antithrombin, prevents the cycle of thrombus propagation whereas prothrombin depressing drugs do not.²⁸ The decided increase in platelet adhesiveness that occurs in patients with myocardial and pulmonary infarction, and that predisposes to thrombosis, is promptly decreased by heparin but not by Dicumarol²³ despite adequate hypoprothrombinemia. In addition heparin is effective in patients in whom there is resistance to Dicumarol, as after the use of potassium iodide.¹⁶

Perhaps of equal or greater importance than its anticoagulant advantages is the fact that heparin rapidly clears serum lipemia and removes fat from the bloodstream, a property not possessed by any of the oral anticoagulants. It has been realized only recently that lipemia, *per se*, is harmful. It increases coagulability of the blood,¹³ platelet adhesiveness,²⁰ plasma viscosity,²⁷ and red cell aggregation and adhesion.⁶ Fibrinolysis is decidedly inhibited after a fat meal,¹⁵ as is other enzymatic activity.⁴ Serum lipemia decreased oxygen tension in the ischemic myocardium of dogs and produced anginal attacks in selected patients.¹⁹ Conversely the clearing of lipemia after heparin injection in atherosclerotic persons resulted in temporarily improved ballisto-

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TABLE 1.—Clotting Time, Arteriovenous (A-V) Oxygen Difference, and Serum Lipoproteins After Intravenous (I.V.) and Subcutaneous (S.C.) Heparin and Dicumarol

| | Clotting Time (Lee-White) | A-V Oxygen Difference (Vol. Per Cent) | Standard Serum Lipoproteins* in mg. Per Cent | | | |
|---|------------------------------|---|---|-------------|--------------|---------------|
| | | | Sf 0-12 | Sf 12-20 | Sf 20-100 | Sf 100-400 |
| Control..... | 12 min. | 3.9 | 405 | 45 | 119 | 29 |
| 10 minutes after 100 mg. I.V. heparin..... | 60 min. | 3.8 | 381 | 38 | 20 | 0 |
| 3 hours after 100 mg. I.V. heparin..... | 28 min. | 6.1 | 349 | 11 | 0 | 0 |
| 12 hours after 150 mg. heparin S.C. Had 3 doses every 12 hours..... | Over 45 min. | 7.8 | 311 | 36 | 22 | 0 |
| On Dicumarol 1 week..... | Prothrombin 25 Per Cent | 4.4 | | | | |

*Sf = Svedberg flotation designation of density.

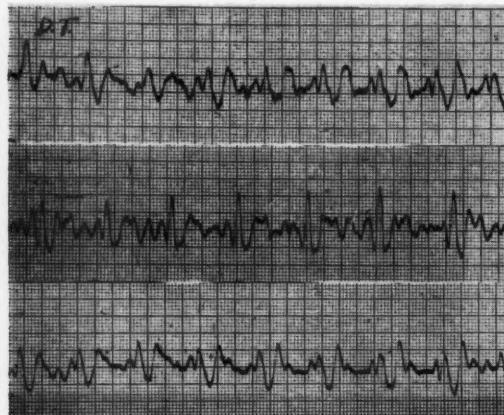


Figure 1.—Records of patient, age 48, with anginal syndrome. *Upper record*: Before heparin, small I and J waves, slurred deep K wave, large L wave, late downstroke pattern. *Center record*: 24 hours after 100 mg. of heparin intravenously, normal pattern. *Lower record*: 72 hours after heparin, record essentially as before heparin.

cardiographic patterns⁸ (Figure 1), in normalization of previously depressed forearm tissue oxygen uptake with concomitant electrocardiographic improvement of anoxic T waves¹² (Table 1 and Figure 2) and in a pronounced average increase (32.7 per cent) in total oxygen consumption in almost half of 46 patients under basal conditions⁹ (Table 2). Saline placebos and Dicumarol had no such effect on tissue hypoxia (Table 3). It appears likely, therefore, that the lipemia-clearing action of heparin in patients with acute infarction, in whom a low fat intake is less effective in reducing lipids than in normal subjects,²⁶ will result in benefits beyond those obtained from the use of oral anticoagulants.

Finally heparin possesses properties advantageous in the therapy of acute coronary occlusion. It inhibited experimental pulmonary edema,²¹ and decreased the incidence of irreversible hemorrhagic shock in dogs.⁵ Heparin, at therapeutic levels, increased myocardial contractility, whereas the latter was decreased by Dicumarol.¹⁴ Following myocardial infarction, erythrocyte aggregation sufficient to produce embolization of the conjunctival arterioles was

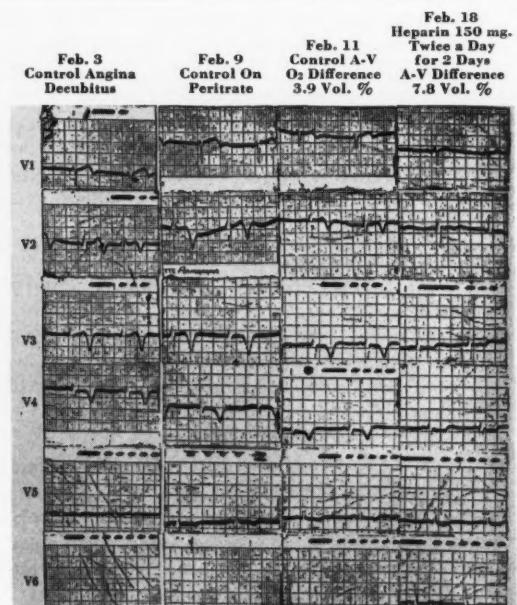


Figure 2.—Electrocardiographic changes associated with decidedly increased arteriovenous (A-V) oxygen differences.

TABLE 2.—Summary of Data in 46 Patients After 100 mg. of Heparin Intravenously

| Oxygen Consumption After Heparin | Number of Individuals | Average Change | Initial Oxygen Consumption* |
|-------------------------------------|--------------------------|-------------------|--------------------------------|
| Increased..... | 20 | 32.7% | 174 |
| Decreased..... | 3 | 15.3% | 164 |
| Unchanged..... | 23 | ... | 205 |

*In ml./minute.

not prevented by adequate prothrombin depression, whereas heparinization prevented a similar phenomenon in patients with malaria.³ Heparin may also normally function in collagen fiber formation²⁴ and in the repair of the endothelial intercellular cement.²²

In view of this rather impressive array of evidence indicating the advantages of heparin therapy, its use as the sole anticoagulant for three to four weeks

in the treatment of acute infarction was suggested.¹⁰ Subsequently a comparative study of heparin alone as compared with heparin plus Dicumarol in patients with severe acute myocardial infarction was undertaken. The complete details of that investigation will be published elsewhere,^{17*} but the summation of the results obtained is shown in Table 4. Mortality in the total group that received heparin for two or three days and then dicoumarin was 38 per cent; in the patients receiving heparin alone for three weeks, the rate was 28 per cent. The difference in results between the two types of therapy was not statistically significant although it was suggestive of heparin superiority. This was substantiated by the findings in the most seriously ill patients, those with three or more complications on admission. In these subjects the mortality rates were significantly different: For the group treated entirely with heparin, 23 per cent; for those receiving heparin and dicoumarin, 58 per cent.

At this point, it may be well to discuss details of the administration of prolonged heparin therapy in actual practice, and some of the problems encountered. A 50 or 100 mg. dose should be injected intravenously when the diagnosis of infarction is made in order to attain full anticoagulant activity immediately. Subsequently, if the patient is receiving continuous intravenous therapy, 50 mg. of heparin should be given in the infusion tube every four hours. This method requires infrequent laboratory controls. If continuous intravenous drip is not being employed, subcutaneous injection is preferred. This has been made possible by the advent of highly refined concentrated aqueous heparin that is as slowly absorbed as the repository or depot material,^{1,11} yet is less expensive, less painful, and easier to administer. In nearly all patients 150 mg. of the concentrated aqueous heparin every 12 hours subcutaneously affords excellent maintenance of anticoagulation effect. In the first two to three days after infarction, slightly larger doses may be needed in a few individuals, as a state of increased coagulability often exists. Frequently, after the first three to four days a dose of 100 to 125 mg. every 12 hours suffices. Ware²⁸ advocated the use of 100 mg. subcutaneously every eight hours and expressed the belief that with this method it is unnecessary to make frequent determination of clotting time. With either technique it is advisable, however, during the first two days, to measure clotting time once daily by the Lee-White method, just before the next scheduled administration of heparin, primarily to check on the adequacy of the dose. Once a stable anticoagulant level is reached, it is not necessary to determine clotting time so often; perhaps once or twice a week is enough. The peak

TABLE 3.—Total Oxygen Consumption (in Milliliters per Minute) After Heparin, After Saline Placebo Intravenously, and After Oral Anticoagulant

| Case | Intra-venous Control | Oxygen Consumption ml./min. | | | After Dicumarol 1 Week |
|------|----------------------|---|-------|---------------------------|------------------------|
| | | After Intra-venous Injection 5-10 Min. | 2 Hr. | Change* in O ₂ | |
| 1 | Heparin 79 | 60 | 97 | +23% | |
| 2 | Saline 83 | 78 | 82 | — | 82 |
| | Heparin 175 | 204 | 253 | +45% | |
| 3 | Saline 202 | 184 | 172 | -15% | 202 |
| | Heparin 247 | 313 | 316 | +28% | |
| 4 | Saline 260 | 278 | 262 | — | 251 |
| | Heparin 320 | 275 | 412 | +29% | |
| 5 | Saline 290 | 280 | 274 | — | 284 |
| | Heparin 189 | 224 | 321 | +70% | |
| 6 | Saline 206 | 186 | 202 | — | 210 |
| | Heparin 79 | 171 | 153 | +94% | |
| 7 | Saline 94 | 106 | 127 | +35% | 110 |
| | Heparin 63 | 97 | 112 | +77% | |
| 8 | Saline 71 | 82 | 80 | +13% | 78 |
| | Heparin 98 | 93 | 125 | +27% | |
| 9 | Saline 92 | 90 | 86 | — | |
| | Heparin 95 | 85 | 121 | +26% | |
| 10 | Saline 104 | 92 | 88 | — | |
| | Heparin 179 | 167 | 276 | +54% | |
| 11 | Saline 160 | 171 | 158 | — | |
| | Heparin 333 | 362 | 440 | +32% | |
| 12 | Saline 320 | 352 | 348 | + 9% | |
| | Heparin 248 | 270 | 266 | + 7% | |
| | Saline 224 | 210 | 213 | - 4% | |

*Compared with control period.

TABLE 4.—Mortality Data on Patients Treated with Heparin Only, and Those Treated with Heparin for Two or Three Days and Then Dicumarol

| | Heparin Only | | | Heparin, Then Dicumarol | | |
|--|--------------|---------------|------------|-------------------------|---------------|------------|
| | No. of Cases | No. of Deaths | Death Rate | No. of Cases | No. of Deaths | Death Rate |
| Total group ... | 100 | 28 | 28% | 63 | 24 | 38% |
| Patients with 3 or more complications on admission ... | 60 | 14 | 23% | 19 | 11 | 58% |

anticoagulant effect is obtained several hours after each injection, but the level is of little concern, as it has been our experience as well as that of the Scandinavian investigators^{2,18} that transient clotting times of one to two hours are not dangerous and neutralization measures to shorten the time are not required. The only indication for the use of protamine or polybrene when heparin is given is the occurrence of active major bleeding. Heparin given intravenously is usually neutralized by one ampule of protamine or the newer and more efficient preparation, polybrene, whereas after subcutaneous or intramuscular injection of heparin, several doses of the heparin antagonist drugs may be needed because of the prolonged absorption time of heparin by those routes. When heparin is stopped because of minor bleeding, clotting time should be determined every 6 to 12 hours and the use of heparin resumed (using a smaller dose) when the time has returned to normal. This is desirable because abrupt premature termination of therapy may predispose to thromboembolic complications, which are more hazardous

*This study was performed at the Los Angeles County General Hospital.

than the hemorrhagic ones. In the entire series of 100 patients in the Los Angeles County General Hospital study¹⁷ and in 36 private cases in which heparin was used, there were no hemorrhagic deaths.

Heparin is also effective when given intramuscularly in 100 mg. doses every eight hours. However, this mode of administration is more likely to be painful and to produce ecchymosis. Because of their previous experience using the older gel preparations, most nurses, unless carefully instructed, will give heparin intramuscularly, or will use the upper arm for subcutaneous injection. The latter site is inadvisable, for the subcutaneous space is limited in this area. The incidence of local pain and ecchymosis at the injection site is minimized if more concentrated aqueous heparin (200 or 400 mg. per cc.) is given very slowly in the subcutaneous fat tissue above the posterior or lateral iliac crests, using a small bore needle (No. 25 French). With this technique many patients may also be satisfactorily treated at home, using a dose of 250 to 300 mg. once daily. However, the 12-hour dosage schedule is preferred, as it affords more sustained but less pronounced anticoagulation (clotting time of 20 to 60 minutes). Recently Wessler described a simple method for the intermittent administration of drugs intravenously over prolonged periods, using an indwelling polyethylene catheter and a rubber-capped adapter.³¹ This procedure can be employed for giving frequent small doses of heparin intravenously without the necessity of repeated venipunctures. It may well be the best technique available, and certainly should be used for sensitive persons who find subcutaneous administration excessively painful.

The only major objection to the routine use of heparin for the entire period that anticoagulant therapy is necessary following thromboembolic disease is the cost. This is partially compensated for by the necessity of more frequent laboratory control tests when prothrombin depressing drugs are prescribed. It is also possible to lower the cost of heparin considerably in most hospitals. Many hospital pharmacists have retained the former charges for heparin in aqueous solution although their costs have been substantially reduced in recent years. They may be induced to lower the price to the patient if the physician explains that he would prescribe heparin for more prolonged periods, rather than oral anticoagulant drugs, if the charges for heparin were reasonable (thus increasing the profit to the pharmacy, which would make more on one vial of heparin than on dozens of tablets).

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Program
FOR
C.M.A. Annual Session
February 21*-24
LOS ANGELES

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*FIRST MEETING OF HOUSE OF DELEGATES WILL BE HELD
SATURDAY, FEBRUARY 20, BEGINNING AT 7:30 P.M.

Common Eye Problems in Children

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PEDIATRICIANS know better than anyone else that a child is as much an individual as an adult. A docile child will submit to an amazing amount of handling and instrumentation of the eyes, but often the ophthalmologist's first examination of a child is also their first meeting. Therefore he knows nothing about the temperament of the small patient, who may be in pain, is usually frightened, and distrusts a strange physician surrounded by bizarre equipment. If the confidence of the child is obtained, an adequate examination can be performed.

In the case of a penetrating injury or laceration of the globe, it is much better to put the child in a hospital and examine the injury under anesthesia, with adequate preparation for operation. Forceful retraction of the lids by either the ophthalmologist or the pediatrician may mean the difference between saving and losing the eye and therefore justifies anesthesia. If the eyelid is lacerated the hemorrhage often precludes an adequate examination of the globe, and since repair of the lid must be done under anesthesia, the eyeball can be examined then for evidence of injury.

The pediatrician in doubt about an ocular laceration should do nothing—instill no drops or ointment, nor force open the lid. Sterile pads should be lightly taped over both eyes, the child kept on his back during transfer to the hospital.

Nonperforating injuries of the globe may result in extravasation of blood into the chamber; if so, both eyes should be bandaged and the child should be put at absolute bed rest, with sufficient sedation, for four to five days. Corticosteroid ointment may be used, but drugs with a contracting or dilating effect on the eye are contraindicated.⁴ These precautions often prevent severe bleeding into the anterior chamber—the so-called “eight-ball” hemorrhage—which ordinarily has an onset 48 to 72 hours after injury, with acute secondary glaucoma, excruciating pain in the eye, generalized headache and nausea. This condition demands prompt treatment in hospital to prevent partial or possibly complete loss of vision.

Foreign bodies on the cornea or conjunctiva often can be removed by the pediatrician with a spud or

- Most penetrating or lacerating injuries of the eye in children justify examination under anesthesia to avoid further harm to an uncooperative patient. The pediatrician in doubt should merely apply a sterile dressing and have an ophthalmologist examine the injury in hospital. Nonperforating injuries may result in severe bleeding 48 to 72 hours later; this may be averted by bandaging the eyes and maintaining rest for four or five days. Removal of foreign bodies should be followed by application of antibiotic ointment and patching to prevent contamination.

Congenital stenosis of the lacrimal duct may clear spontaneously or through application of decongestants and sympathomimetic drops. More severe effects, especially infection, justify probing at six months or earlier. The operation should be done under general anesthesia, preferably in hospital.

Acute conjunctivitis is best treated by local application of antibiotics or sulfonamides only. Chronic infections may be better managed with the addition of corticosteroids, which reduce local inflammation and control bacterial reaction. Bacterial study should be done only if empirical antibiotic therapy fails. Bacterial desensitization may be helpful. The same methods are effective in blepharitis, aided by hygienic measures. Corticosteroids are most useful in allergic inflammations.

Refractive difference is difficult to test before a child can read, and apparent defects may be due to lack of cooperation. Marked inequality of the eyes may signify organic disorder. Strabismus, on the other hand, can be detected as early as 12 or 15 months and should be treated as early as possible by proper lenses, surgery, or both. Pediatricians and parents should be aware that many children appear to have strabismus because of wide epicanthi and deep-set eyes.

a cotton-tipped applicator after the instillation of tetracaine, but if the child is uncooperative or if considerable manipulation is required, the procedure should be done in hospital under anesthesia. After removal of any corneal foreign body, except the most superficially located, antibiotic ointment should be instilled and the eye patched for 24 hours. Next day the cornea should be stained with Fluorescein to ascertain that epithelialization has occurred. Some ophthalmologists feel that it is better to leave the eye uncovered because profuse tearing keeps the eye clean and washes out any micro-organisms that may have been introduced with the foreign body; but in my experience children are much less

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likely to rub an eye that is patched, and the average child's hands are far from clean most of the time.

Congenital stenosis of the lacrimal duct has been reported in as many as 6 per cent of all children,³ with half the cases clearing spontaneously in a few weeks or months. Some pediatricians believe in waiting 18 or 24 months before treating, though others would probe when the child is two months old² or even earlier.¹ If one or both eyes have constant tearing and intermittent discharge, there is no reason to wait beyond the sixth month, and in cases with chronic infection and profuse discharge the probing should be done even earlier. Although it could be done in the office, it is preferable to operate in the hospital where all possible anesthetic precautions can be taken. In some cases, not in most, probing may have to be repeated.

Probing with local or no anesthesia, and with the infant restrained in a sheet, is common but hazardous. A false passage can be made by this method, and the author has observed three cases in which dacryocystorrhinostomy was later required.

Medical treatment seems to have only limited usefulness, but one method that seems to justify more frequent trial is the application of Neosynephrine® or a similar drug to shrink nasal tissues, with the concurrent application of sympathomimetic eye drops. Because the lacrimal duct is so narrow in the very young infant, a slight reduction of tissue turgor may make a critical difference in the patency of the duct. In most cases so treated, antibiotic salves have been applied and daily massage or expression of fluids used to reduce purulence.

For the many types and degrees of acute and subacute conjunctivitis with running of the eyes or pus, the local application of antibiotics or sulfonamides usually suffices. There is no advantage in the addition of corticosteroids, which may even be dangerous in herpetic keratitis since the corneal ulceration may be stimulated to progress at an alarming rate.

For chronic types of conjunctivitis, though—particularly when the lid is involved—the addition of steroids has proved very beneficial, for it may help to control allergic reaction to bacteria and to reduce the inflammatory condition of lid margins and conjunctiva. Because conjunctival scraping for bacterial study is so unpleasant and often frightening to a child, empirical treatment is justified; but in intractable infections smear and culture studies must be made, and bacterial sensitivity tests also may be very helpful. In particularly stubborn staphylococcal infections, systemic desensitization with staphylococcus toxoid may be added to local treatment.

The usual case of blepharitis or blepharoconjunctivitis can be brought under control in a week with

a combination of antibiotic with a corticosteroid, in the dual form of drops administered hourly during the day and ointment applied at night. The mother should be instructed to rub the ointment thoroughly into the base of the cilia with the fingers or with a cotton-tipped applicator. Drops are more agreeable for daytime use, since the ointment tends to melt and run; the soluble corticosteroids are preferable to the suspensions, which leave a white residue at the inner canthus that children of school age often resent. A valuable adjunct in particularly stubborn cases is a regimen of eye hygiene that includes washing the face morning and night with hexachlorophene soap, but this is unsuitable for younger children because the active ingredient, irritating to the conjunctiva and possibly harmful to the cornea must be thoroughly rinsed before the eyes are opened.

For allergic conjunctivitis and the "itching" of the eyes associated with vasomotor rhinitis, corticosteroid solutions are most useful. When a secondary infection is present, the combination with an antibiotic may be indicated. A similar regimen works well in vernal conjunctivitis. In California, which is subtropical and is limited to a dry and a wet season, a concentrated corticosteroid solution or suspension given every hour until symptoms are brought under control is the best treatment devised to date for this annoying condition. After a few days, the frequency of installation can be decreased. During the wet season, when symptoms are much reduced, the milder corticosteroid solutions combined with sympathomimetic drugs and antihistaminics are usually adequate. Because of the rather profuse mucous discharge associated with vernal conjunctivitis, most patients are more comfortable with solutions than with ointments.

The ophthalmologist is often asked for an opinion about preschool vision tests and about the proper time for complete refraction testing. These questions are somewhat related.

About four and a half years seems the ideal age for visual testing; earlier, the child's cooperation and the accuracy of response is doubtful. If at this age his reaction is unsatisfactory, another attempt should be made in three months. For the busy pediatrician, the "E" chart based on the Snellen notation is by far the most satisfactory test device for children under seven years of age, since most children educated by modern methods do not know the alphabet until the second grade. This chart, hung in a hall or treatment room with a range of about 20 feet and reasonable overhead lighting, is quite sufficiently accurate. At the age of four and a half years, 20/40 vision is satisfactory; at five or six years, 20/30 is normal, and 20/20 may not be

attained before seven or eight. An apparent difference of one line between the eyes may be due simply to lack of cooperation and ordinarily is not significant unless other symptoms are present; a difference of two lines usually justifies further investigation.

Decided inequality of the eyes (e.g., 20/30 vision in one and 20/200 in the other) demands immediate attention, for it may signify an intraocular defect or, more commonly, dimness due to disuse (amblyopia ex anopsia). The latter condition is often associated with strabismus, but other causes are probably more common than is realized; in many cases function can be restored if occlusion of the better eye is instituted before the age of six years. If the refractive error is pronounced, spectacles may be needed in addition to patching. Patching should be continued, with monthly checks, for three months or longer.

Refraction study may be necessary when the Snellen test does not rule out borderline myopia or when visual defects are otherwise evidenced.

Since a child's accommodative ability is so great, spectacles are not usually prescribed except for severe hyperopia, astigmatism or myopia. In these cases, not only clarity of vision, but ocular comfort may be obtained by corrective lenses. If the child is very active or particularly interested in sports, glasses can be dispensed with after school or during play hours. Case-hardened lenses, such as safety glasses used in industry, have proved very satisfactory for children. For the past few years, plastic lenses have been available. They are light in weight, unbreakable, and therefore reassuring to parents. The disadvantage is that they are easily scratched.

Glasses are not prescribed for low degrees of myopia if the child is doing satisfactory work in school and has no visual complaints. The parents should be advised that glasses will undoubtedly be needed later, by which time they are psychologically better prepared. An adequate explanation with a few simple diagrams often reassures parents. Because of many articles in lay periodicals, people have become fearful of such terms as "progressive myopia." Once it is understood that all acquired myopia is "progressive" and that it does not in itself lead to blindness, cooperation with the physician is infinitely better.

When to refer a child with strabismus is a problem facing the pediatrician almost daily. As with most medical conditions, the earlier that treatment is begun, the better is the chance for cure; in the first year of life, however, strabismus does not demand attention by an ophthalmologist unless the parents are unduly apprehensive and the pediatrician needs help in reassuring them. Most strabismus,

convergent or divergent, develops in the second, third or fourth year of life. Even at 12 to 15 months the angle of squint can be measured and refraction adequately tested.

Strabismus is basically bilateral; when a child with previously normal alignment is noted to have deviation, funduscopic examination should be done promptly, since the turning may be the first symptom of intraocular tumor or other eye disease.

It is doubtful that anyone "outgrows" strabismus, though many persons believe they have done so. They probably had an appearance of strabismus which is quite common in children, especially those with wide epicanthi and deep-set eyes. When a child has this conformation and the pediatrician is in doubt, the ophthalmologist may help to reassure both him and the parents that the case is one of pseudostrabismus.

Most true strabismus can be treated only by correct use of lenses, by surgery, or, in some cases, by a combination of these methods. Occlusion and orthoptics are important adjuncts. Especially in convergence, the squinting eye is often amblyopic, as can be readily demonstrated in older children by acuity tests or evidenced in younger ones by poor fixation of the squinting eye on screening tests. Before operation is possible, the fixing eye must be constantly occluded until good fixation has developed in the other. This process may require two weeks to several months, and in older children it can be followed through periodic checks with the Snellen chart.

Mere alignment of the eyes does not insure binocular vision; orthoptics, on the other hand, is most valuable in teaching fusion but cannot by itself produce alignment. Before the age of four and a half years children generally do not cooperate enough to make orthoptics worthwhile, but from then until the age of seven the method can be most beneficial.

In older children with strabismus, even though one eye may be incurably amblyopic and fusion impossible, operation may be justified for cosmetic reasons alone, for straightening of the eyes can relieve the emotional burden on both patient and parent.

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Alcohol and Driving

Application of a Definition in a Way to Deter Offenders

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THAT ALCOHOL is an important factor among causes of traffic accidents has become increasingly apparent and numerous studies of the relative importance of alcohol and of measures to control it have been carried out. Different investigations have yielded widely divergent results with regard to the proportion of mishaps attributable to alcohol. No doubt the divergence is owing at least in part to the fact that it is indeed not easy to evaluate the information to be obtained from accident reports in this regard. In accidents of certain types, notably fatal accidents in which only one vehicle is involved, the percentage of drivers adjudged to be intoxicated on the basis of analysis of body fluids for alcohol is overwhelming. Although it is not obtainable, information about comparable blood alcohol concentrations in drivers on the road at the same time and place who were not involved in accidents would be of utmost importance, for conclusions cannot be drawn without study of the incidence of accidents involving drinking drivers in comparison with a similar group of nondrinking drivers under the same conditions of traffic hazard. Just how great this difference would be is still problematical, but that it is present to some degree is uncontroversial.

Traffic accidents are among the major causes of death in the United States, and until quite recently the number of deaths so caused had been increasing year by year. However, the number of deaths per passenger mile has decreased—this in spite of the greater congestion of traffic and increased speeds of motor vehicle operation. Since the reason for this must lie in better cars, better roads and better driving, anything that will improve driving standards may be expected to lessen the number of deaths per passenger mile. And there can be no question but that preventing persons under the effect of alcohol, whether pedestrians or drivers, from using public roads would improve accident statistics. It may be argued that there are other factors of equal or greater importance in this regard, but let us here concern ourselves only with alcohol.

Quite apart from the question of the legal rights

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Submitted May 29, 1959.

Dr. Newman died September 19, 1959.

• Increasing speed and congestion of vehicular traffic have made the effect of alcohol on the drivers of motor vehicles a matter of growing concern. It is not possible, using the definition of drunken driving that is now prevalent in California, to establish a rule, based on a stipulated minimum concentration of blood alcohol, that will serve to indict most of the guilty yet free all the innocent. If, instead of comparing the suspected driver with the hypothetical "ordinarily prudent and cautious person" as is now done in California, we accept the more widely prevalent definition of driving under the influence which defines the offense as any appreciable diminution in skill ascribable to alcohol, then a blood alcohol concentration of 150 mg. per 100 cc. or even 100 mg. per 100 cc., could suffice for conviction.

For the rule as to alcohol content of the blood to be an effective deterrent of drunken driving, all drivers—not just those involved in accidents or observed to drive erratically—would have to be subject to testing.

of the individual, it is obvious that the simplest way of meeting this problem would be the prohibition of the taking of alcohol by all users of the road. Such a legal prohibition would be theoretically easy of enforcement, since modern methods of alcohol analysis would give an unequivocal answer to whether or not a suspect had consumed alcohol. Current legislation in a majority of states of the Union has tended in this direction, with an amelioration of the prohibition in the direction of setting up fixed values of alcohol concentration as criteria of whether or not the individual is "under the influence" of alcohol. The figure generally chosen has been 150 mg. per 100 cc. of blood. Persons with alcohol concentrations above that value are presumed to be under the influence. In the zone from 50 to 150 mg. per 100 cc., there is no presumption on the basis of the chemical evidence as to whether or not the individual is under the influence, while with a concentration less than 50 mg. per 100 cc. he is presumed not to be under the influence. All experimental work, using actual driving tests or tests known to correlate with driving ability, has shown that all persons tested, regardless of degree of tolerance to alcohol, have an appreciable reduction in driving skill at an alcohol concentration of

100 mg. per 100 cc. of blood. Setting the actual level at 150 mg. then can be considered as a measure to allow for variability in analytic method which under certain conditions may approach this degree. Indeed, there is agitation to reduce the level to 100 mg. per 100 cc., and from some quarters even to 50 mg. Since it is the absolute prohibition of all alcohol that could be expected to make the most improvement in accident statistics, there can hardly be objection on theoretical grounds to this reduction of the inculpatory level of alcohol concentration. But such precision of definition does bring up certain practical considerations.

The objective of any legislation in this field should be, primarily, to prevent persons who have taken alcohol in any amount that will reduce their ability to drive from operating a motor vehicle; punishment of persons guilty of overt offense should be only a secondary consideration based on surmise that certainty of conviction for an offense acts as a deterrent. Whether or not a driver has drunk enough alcohol to elevate the alcohol content of his blood to the culpable level can be easily determined by a simple and accurate chemical test. Thus from the standpoint of enforcement and punishment of the offender who comes to the attention of the police, the problem is simplified if legislation is enacted that defines driving "under the influence" in terms tantamount to those of the Arizona definition—that is, *any appreciable reduction of ability to drive brought about by alcohol*. This in effect prohibits driving by anyone with a concentration of alcohol in the blood which has been shown in all individuals to reduce driving ability to an appreciable degree.

In order to appraise how effective such legislation will be as a deterrent to drinking and driving we must, however, look further into the matter. A quite obvious but important factor is that, to be prosecuted, a miscreant must come to the attention of the police. This means that he must be involved in an accident or be observed to drive in so erratic a manner as to be stopped for questioning. Now, in order for any measure to act as an effective deterrent to drinking and driving, it is essential that the individual recognize the jeopardy in which he places himself when he takes the wheel after drinking enough to raise the alcohol concentration in his blood to the culpable level. So long as he knows that his sobriety is not likely to be questioned unless he gets into an accident or is observed to drive erratically, the deterrent effect will be small, for no one, drunk or sober, ventures onto the highway with the idea he is going to be involved in an accident or will drive in such a manner as to come to the attention of the police. Indeed, the effect of alcohol is to minimize these possibilities in the mind of the consumer.

If, on the other hand, the individual knew that it was an offense to drive with more than a certain concentration of alcohol, and that moreover he was liable to be stopped at any time by properly constituted authority and a test made to determine his alcohol concentration, the deterrent effect would probably be very great. Although no data are available on this point, the fact that on the few occasions that such spot checks have been made, during times of greatest hazard at the holiday season, very few persons were found with alcohol content in the blood of more than 150 mg. per 100 cc., would indicate that, with the possibility of a road block or spot check confronting him, the drinker stays home or takes a taxi.

Objections to such police methods will immediately be raised on the grounds of undue infringement of personal liberty. One might equally question the propriety of enforced checking of brakes and lights, or even weight checks on trucks for overloading, all of which are well accepted police practice. A simple and entirely untraumatic test of expired breath, subject to no objection on the basis of invasion of the individual's privacy, could serve as a screening procedure, with positive findings by this means justifying a reasonable suspicion of intoxication which would justify arrest and a more precise confirmatory test. It seems likely that an informed public, after an effective educational campaign, knowing of the possibility of being subjected to such "inspection" when driving, would elect to stay off the road after imbibing—and this of course is the primary objective of legislation to curb drunken driving.

Just how low the culpable level of alcohol concentration in the blood could be set and be acceptable to the majority of the voting public is difficult to say. The level of 150 mg. per 100 cc. that is now advocated as the level of culpability would certainly produce some degree of impairment of driving ability in any person, yet provide some leeway to take care of analytical variation. Since the least amount of alcoholic beverage required to produce such a level is in the vicinity of six bottles of beer or six mixed drinks, public sentiment should not be outraged by prohibition of consumption of such an amount of liquor when driving. No doubt, adoption of a level of 50 mg. per 100 cc. would be preferable from the standpoint of reducing accidents, but it is very questionable whether this concentration will cause an appreciable reduction in driving ability in all persons; and in addition the public reception of a law forbidding driving after consumption of two bottles of beer might be unfavorable.

A prerequisite to any of the foregoing measures is the adoption of a definition of driving under the influence based on the Arizona definition. The

essence of this definition is that the standard of driving ability is that of the particular individual free of alcohol, and that an offense occurs when there is any appreciable reduction of this ability brought about by alcohol. Thus a person if originally an unusually skilled driver may still be able to drive as well as would be required for granting an operator's permit and nevertheless be "under the influence." Arbitrary speed limits, which are the same for the marginal as for the skilled driver, are regulations of a comparable kind, yet are widely accepted as necessary in controlling road traffic.

In states other than Arizona—and California may be taken as an example—the definition employed as a guiding principle is quite different. Here the decisions on which present interpretation of the law is based stated that for an individual to be considered under the influence of alcohol he must be so affected as to make him unable to drive in the manner of an ordinarily prudent and cautious person who has not ingested alcohol. Here the individual is not compared with himself when free of alcohol, but with a hypothetical person whose only known attributes are set forth as ordinary prudence and caution. Since it is to be presumed that an operator's permit would not be granted anyone not believed to possess these attributes, the standard of driving set up may be presumed to be that of the individual of least driving ability able to qualify for a driver's license. There are no adequate data for conclusion as to how much alcohol in the blood would make *anyone*, regardless of tolerance or driving skill, unfit to drive, although for some persons the tolerance is known to be above 150 mg. per 100 cc. Thus in states which define the offense as does California, the demonstration of a certain concentration of alcohol, although of value in establishing the minimum amount of alcohol consumed, cannot of itself prove that the individual was under the influence as defined.

The definition of the California type, requiring of an individual only that degree of ability that qualifies for the activity in question, is familiar to physicians in regard to the offense of professional malpractice: The physician is required only to exercise that degree of skill which is possessed by the average practitioner in his community. From

the standpoint of equity and justice this would seem a good principle, and is hard to assail from that standpoint. When applied to the offense of driving under the influence of alcohol, however, it makes successful prosecution difficult, since not enough information is available to establish the alcohol concentration at which all individuals will have their driving ability reduced below that of the "ordinarily prudent and cautious person," and indeed such evidence as is available indicates that this level would be so high as to make chemical tests essentially valueless except in establishing the amount of alcohol consumed.

Much controversy has attended the attempt, in California, to apply the 150 mg. per 100 cc. standard (which is appropriate for the Arizona definition) to the definition established by usage in California. To accomplish this, it is necessary to assume that no person, regardless of driving skill and tolerance to alcohol, if he has a blood alcohol content of 150 mg. per 100 cc. is able to drive in the manner of the "ordinarily prudent and cautious person." Since there is no valid evidence to be found in the literature to support this assumption, the presence of such a concentration of alcohol cannot, in itself, constitute proof of "driving under the influence" in California.

Whether or not the definition of the offense of driving under the influence of alcohol should be changed to conform to that typified by Arizona is a matter for the State Legislature. Attempts to obtain such legislation have failed in the past, although it seems to the author that the seriousness of the problem of alcohol and driving under present conditions of high speed and congested traffic warrants such a change. If such legislation is forthcoming, however, its greatest benefit, and perhaps the only justification for the infringement on personal liberty that it entails, lies in its deterrent effect on driving after drinking. It is the author's opinion that this deterrent can only be obtained to an effective degree if not only the individual involved in an accident, but all users of the highway, be subject to evaluation of blood alcohol concentration. Practical and efficient methods to accomplish this are at hand; what remains to be accomplished is the requisite legislation.

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Prostatectomy

A Survey of 2,000 Cases

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AS MAN'S LONGEVITY INCREASES, the problems of prostatic obstruction grow. The problems are of two orders—an increasing number of cases and, oftentimes, a decision as to the best method of treatment.

Neither to advance any new methods of approach nor to advocate in particular any of the established procedures, the purpose of this communication is to present a series of consecutive cases of prostatic operation done at one institution (Southern Pacific General Hospital, San Francisco) over a period of approximately ten years, and to draw some very generalized conclusions from the observations.

The series embraces 2,000 consecutive cases of prostatectomy performed at the Southern Pacific General Hospital from 1947 to 1957, and the procedures used were as follows:

| Procedure | No. of Cases |
|--------------------------|--------------|
| Transurethral resection | 1,327 |
| Suprapubic prostatectomy | 614 |
| Perineal prostatectomy | 43 |
| Retropubic prostatectomy | 16 |

Carcinoma

Suspected carcinoma of the prostate was treated surgically in 139 cases, transurethral resection having been used in 128 cases and radical perineal prostatectomy in 11. (One hundred thirty-nine was not the total number of cases of suspected carcinoma, or even the total proven by needle biopsy, but merely the number in which surgical intervention was indicated.) Of 1,861 cases in which the preoperative diagnosis was benign prostatic hypertrophy, 56 (3 per cent) were later reported by the pathologist as having some malignant changes. Thirty-six of the 56 patients had been treated by transurethral resection, 17 by suprapubic enucleation and three by a simple perineal enucleation.

Mortality

There were 38 deaths in this series, a mortality rate of 1.9 per cent. Mortality data associated with each of the procedures in the present series are compared with data reported recently by other investigators in Table 1.

The average age of all the patients in the series

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• A statistical analysis was made of 2,000 consecutive cases in which prostatic operations were done in the period 1947-1957 at the Southern Pacific General Hospital. The operations included transurethral resections as well as perineal, retropubic and suprapubic prostatectomy.

The mortality rates were lowest for transurethral resection and highest for retropubic prostatectomy. Coronary artery disease and pulmonary embolism were the chief causes of death. It was generally felt that preliminary partial vasectomy previous to transurethral resection added very little to successful convalescence. Although distilled water was used routinely for irrigation during transurethral resection, there was no incidence of lower nephron nephrosis.

The incidence of recurrence of prostatic obstruction was highest by far after transurethral resection.

was 62.6 years; the youngest was 29 and the oldest 94. The average age of the 38 who died was 66.3 years. Two were between 50 and 55, two 55-60, six 60-65, ten 65-70, five 70-75, six 75-80, five 80-85, two 85-90. The causes of death were:

| No. of Cases | |
|---|----|
| Cardiac (thrombosis or failure)..... | 12 |
| Pulmonary embolism..... | 6 |
| Hemorrhage..... | 4 |
| Cerebrovascular accident..... | 4 |
| Pneumonia..... | 3 |
| Perforated bladder..... | 2 |
| Lower nephron nephrosis (after perineal prostatectomy)..... | 2 |
| Metastatic disease with death shortly after operation..... | 2 |
| Uremia..... | 1 |
| Mesenteric thrombosis..... | 1 |
| Septicemia..... | 1 |

In 1950 Mathé⁷ reported on a similar series of operations done at Southern Pacific General Hospital in the 20 years preceding the present series. Since the mortality rates were not readily comparable with those shown in Table 1, owing to differences in categories used in reporting, they are shown separately in Table 2.

Morbidity

The complications that occurred in the present series are listed in Table 3. Record keeping at the time of this series was such that information could

TABLE 1.—Mortality Rates Associated with Various Prostatectomy Procedures

| Procedure | No. of Patients | Mortality Rate (Per Cent) | Reported by |
|--------------------------|-----------------|---------------------------|----------------------------------|
| Transurethral resection | 1,327 | 1.8 | Authors in present series |
| | 1,022 | 3.1 | Taylor and Kaylor ⁸ |
| | 1,000 | 1.8 | R. W. Barnes et al. ¹ |
| Suprapubic prostatectomy | 614 | 1.62 | Authors in present series |
| | 515 | 7.6 (1937-1945) | MacDonald ⁶ |
| | 535 | 2.0 (1947-1951) | |
| | 150 | 2.7 | Taylor and Kaylor ⁸ |
| Retropubic prostatectomy | 16 | 6.25 | Authors in present series |
| | 678 | 1.6 | Lich ⁵ |
| | 1,000 | 2.4 | Campbell and Blue ² |
| | 150 | 0.7 | Taylor and Kaylor ⁸ |
| Perineal prostatectomy | 43 | 4.65 | Authors in present series |
| | 41 | 2.0 | Taylor and Kaylor ⁸ |

TABLE 2.—Mortality Rate Associated with Prostatic Operations at Southern Pacific General Hospital in 20-Year Period, 1929-1948

| Year | Prostatectomy | | Transurethral Resection | | |
|--------------|---------------|---------------------------|-------------------------|---------------------------|---------------------|
| | No. Cases | Mortality Rate (Per Cent) | No. Cases | Mortality Rate (Per Cent) | Combined (Per Cent) |
| 1929 to 1935 | 162 | 11.7 | 72 | 1.3 | 8.5 |
| 1936 to 1946 | 301 | 5.3 | 465 | 2.8 | 3.6 |
| 1946 to 1948 | 123 | 2.4 | 354 | 1.1 | 1.4 |

not be obtained on complications beyond the immediate postoperative period.

Hemorrhage was considered a complication if the patient had to be returned to surgery for hemostasis or evacuation of clots, or if he received one or more transfusions of whole blood postoperatively. While the number of such cases in the series may seem quite high, it may be tempered by the knowledge that it was not the routine practice at this hospital to give transfusions either during or after operation unless the patient was anemic preoperatively or loss of blood during operation was appreciable (usually if estimated blood loss was over 400 cc.).

Incontinence was listed as a complication if it was even mentioned on the patient's chart. Thus the degree varied from mild, stress incontinence to complete loss of sphincter control.

Because choice between open prostatectomy and the transurethral operation is controversial, data on the occurrence of vasitis and epididymitis with the various procedures was listed separately to help cast light on the subject (Table 4). Bilateral vasectomy was routinely carried out as an adjunct to all open prostatectomies. However, where the transurethral operation was employed, only 740 of the 1,327 patients were subjected to vasectomy.

While vasitis is admittedly not a serious complication, the incidence of it as compared with the incidence of epididymitis was listed. Vasitis was manifested by an inflammatory reaction, at or above the site of excision, of such degree that mention was

TABLE 3.—Incidence of Complications in Series of 2,000 Cases of Prostatectomy

| | No. of Cases |
|---|--------------|
| Hemorrhage (primary and secondary) | 121 |
| Transurethral resection | 80 |
| Suprapubic | 39 |
| Perineal | 2 |
| Thrombophlebitis | 52 |
| Incontinence | 30 |
| Transurethral resection | 18 |
| Suprapubic | 9 |
| Perineal | 3 |
| Urethral stricture | 21 |
| Cardiac decompensation | 19 |
| Bladder neck contracture | 16 |
| Pneumonia | 12 |
| Perforation of prostatic capsule and/or bladder | 4 |
| Wound infection | 3 |
| Fever of unknown origin | 2 |
| Osteitis pubis | 2 |
| Perineal fistula | 1 |
| Peritonitis | 1 |

made in the patient's record of fever, pain or induration.

The incidence of recurrence of obstruction or the need for secondary procedures associated with each kind of operation is shown in Table 5.

DISCUSSION

In this series of 2,000 cases of prostatectomy, removal was done transurethrally in the majority. While no mention was made of the size or weight of the gland involved, it is recognized that the larger

TABLE 4.—Incidence of Epididymitis and Vasitis Associated with Various Operative Procedures

| Surgery | No. of Cases | No. Cases of Vasitis | No. Cases of Epididymitis |
|---|--------------|----------------------|---------------------------|
| Transurethral resection with vasectomy | 740 | 9 | 4 |
| Transurethral resection without vasectomy | 587 | 0 | 19 |
| Open prostatectomy all with vasectomy | 673 | 7 | 4 |
| Total | 2,000 | 16 | 27 |

TABLE 5.—Incidence of Recurrence of Obstruction Associated with Various Prostatic Operations

| Kind of Operation | No. of Recurrences Within | | |
|--------------------------|---------------------------|---------------|----------------|
| | 0 to 5 Years | 5 to 10 Years | 10 to 20 Years |
| Transurethral resection | 109 | 28 | 16 |
| Suprapubic prostatectomy | 4 | 8 | 1 |
| Perineal prostatectomy | 0 | 0 | 0 |
| Retropubic prostatectomy | 0 | 0 | 0 |

glands were removed by open prostatectomy at this institution. The suprapubic approach, a modified Freyer³ procedure as discussed by Gibson⁴ in 1954, has been the method most often employed.

Mention should also be made of the fact that plain distilled water was the only irrigating solution employed during transurethral resections. Intravascular absorption and hemolysis were not a problem. There

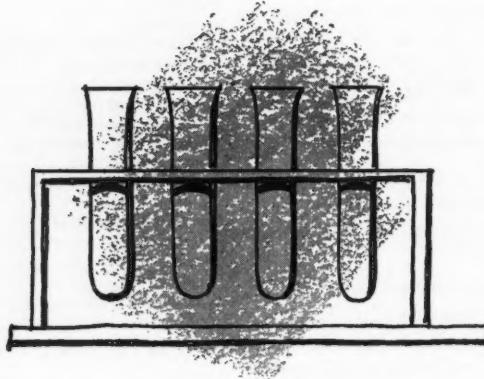
were no cases of lower nephron nephrosis following any of the 1,326 cases of transurethral resection.

Although completely accurate data on this particular factor are not available, antibiotics were liberally used after operation in the early part of this ten-year study and the use of these agents prophylactically has been studiously avoided in more recent years, yet there was no real difference reflected in either the mortality or morbidity rates.

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Atopic Dermatitis Due to Sensitivity to Pollen

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SINCE 1930 observers have reported instances of atopic dermatitis due to airborne allergens.* Rowe reported on the disease in 30 patients in 1936¹⁰ and made another report in 1946.⁹ In the more recent report dermatitis of the hands was the major allergic manifestation. The present communication is a report of observations from the diagnostic and therapeutic standpoints in 100 patients, 64 females and 36 males, studied within the past 12 years whose sole or major manifestation of allergy was atopic dermatitis due to pollen sensitivity. In all cases good or excellent results were obtained with desensitization therapy.

Fifty-eight of the patients were in the age bracket 15 to 50 years at the time of onset; 18 were under 15 years of age, the youngest being six months old, and 24 patients were over 50, the eldest being 78.

A history of past or present symptoms of allergic reaction, in addition to the dermatitis for which they sought treatment, was obtained in 57 patients. Seasonal hay fever in 31 patients was most frequently noted. The fact that 43 patients gave no history of any other allergic manifestation emphasized that in some persons the skin may be the only "shock tissue" of allergic response.

The extremities were the most frequently involved areas—sometimes alone, sometimes with other areas of the body besides. The eruption was generalized in 32 patients; confined to the head and neck alone in one; the ears in three; the eyes in two; the face in 12; the trunk in three; and the hands in 16 (Table 2). Localization or distribution of the eruption gave no clue as to the diagnosis of sensitivity to pollen.

The character of the eruption varied widely: Some minute and pin-point lesions, some vesicular and at times vesiculopustular, either discrete or massed in patches or large areas of erythema, edema, dryness, oozing, and pruritus—all these manifestations were observed, some of them in few cases, some in many. The intensity of eruption frequently varied from week to week.

In some cases in this series the atopic dermatitis was purely seasonal, in some perennial with seasonal exacerbations, and in others perennial without strik-

• Observation of 100 patients with atopic dermatitis due to hypersensitivity to pollen over a period of 12 years emphasized certain important diagnostic and therapeutic features. The incidence was higher in females than in males and higher in middle and old age than in the earlier years.

Pollen dermatitis may be the sole or major manifestation of allergy; 43 patients gave no history of other allergic symptoms. It may involve any or all areas of the body. The site or the distribution of lesions or the nature of the lesions gave no clue as to the diagnosis of pollen sensitivity.

The character of the eruption varied widely from patient to patient and in given patients from week to week at times.

Atopic dermatitis due to pollen sensitivity may be purely seasonal, perennial with seasonal exacerbations or perennial without seasonal variation.

Reactions to skin testing with pollens suspected as allergens may be positive, equivocal or negative. In 58 patients there were positive correlative skin reactions to pollens.

The diagnosis of atopic dermatitis due to pollen sensitivity, and the composition of the desensitizing antigen or antigens, must be based primarily on the clinical history and the area of residence.

Most patients could tolerate only very weak dilutions at the beginning of desensitization therapy. Strong dilutions caused exacerbation of the dermatitis.

Good or excellent results were obtained with perennial pollen desensitization therapy administered over long periods. In 13 patients good results took four to eight years of desensitization therapy. Fifty required less than two years. Tolerance of the patient for a given dose of antigen should determine the maximum dilution used in therapy.

TABLE 1.—Personal Past and Present History of Allergic Manifestations in 100 Patients

| | No. of Patients |
|-----------------------------------|-----------------|
| Seasonal hay fever..... | 31 |
| Perennial allergic rhinitis..... | 4 |
| Bronchial asthma—Seasonal..... | 4 |
| Bronchial asthma—Nonseasonal..... | 3 |
| Urticaria..... | 10 |
| Allergic headache..... | 1 |
| Gastrointestinal allergy..... | 4 |
| No other allergic symptoms..... | 43 |
| | 100 |

Chairman's Address: Presented before the Section on Allergy at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

*References 2, 4, 5, 6, 7, 9, 11, 12, 13, 15.

ing seasonal exacerbation (Table 3). Ninety of the 100 patients resided in the temperate areas of north central California where, regardless of season, the air is never completely pollen-free. *Poa annua*, cut flower, cedar, eucalyptus and acacia pollens are present in the air during the late fall and early winter months, thus accounting for the perennial character of the eruption in many persons.

As in all clinically manifest allergy, the sole evidence of pollen sensitivity may be obtained only from careful analysis of the patient's history.⁸ In cases in which allergic reaction to pollens is perennial, seasonal exacerbations, if they occur, may not be apparent to the patient at first, and may become apparent to a clinician only after a year or more of observation. The season of onset and the month of the first visit of the patient to the physician frequently offer important diagnostic clues.

Results of skin testing with important pollens and other inhalants to which patients were exposed and with important ingested foods are shown in Table 4. Tests were performed by the scratch, puncture or intradermal methods. Positive reactions to seasonal pollens considered clinically important were elicited in 58 patients and to pollens considered to be of no clinical importance in 18. Twenty-four patients were completely nonreactive, having no reaction to any of the allergens used in the tests. Scratch or puncture tests with large numbers of seasonal pollens occasionally produced severe exacerbations of the eruption. Hence, in cases in which a high degree of sensitization is suspected, scratch or puncture tests should be limited and extremely weak dilutions of antigens should be employed for intradermal testing.

Because reactions to offending pollens may be strongly or moderately positive, or equivocal, or negative and because skin tests when positive may represent past, present, or potential allergic sensitivity, analysis of the history becomes the ultimate criterion for establishing the diagnosis of pollen sensitivity and for appropriate desensitization therapy.

Frequently patients with pollen dermatitis have a high degree of sensitization, necessitating the use of extremely weak dilutions of desensitizing antigen for institution of therapy and frequently for maintenance therapy as well. In this series 67 patients could tolerate initial dilutions no stronger than of 1:5 billion. Thirty-three patients had tolerance for dilutions between 1:500 million and 1:50,000. Antigen dilutions stronger than 1:50,000 were not given initially in any patient.

The strength of the final desensitizing antigen used was 1:5 million billion in one patient, between 1:50 thousand billion and 1:5 billion in six patients, between 1:500 million and 1:50,000 in 27 patients, between 1:5,000 and 1:500 in 16 and 1:50 in 50 patients.

TABLE 2.—*Areas Involved in Allergic Dermatitis in 100 Cases*

| | Alone | With Other Areas |
|-------------------------|-------|------------------|
| Head and neck | 1 | 5 |
| Ears | 3 | 3 |
| Eyes | 2 | 10 |
| Face | 12 | 21 |
| Upper extremities | 6 | 4 |
| Lower extremities | 2 | 2 |
| All extremities | 10 | 60 |
| Trunk | 3 | 4 |
| Hands alone | 16 | |
| Generalized | 32 | |

TABLE 3.—*Seasonal Incidence of Dermatitis*

| | No. of Patients |
|---|-----------------|
| Spring only | 17 |
| Fall only | 5 |
| Spring and fall | 26 |
| Perennial | 17 |
| Perennial with spring exaggeration | 17 |
| Perennial with fall exaggeration | 4 |
| Perennial with spring and fall exaggeration | 14 |
| | 100 |

TABLE 4.—*Results of Skin Tests (Scratch or Puncture Method)*

| | No. of Patients Reacting | | |
|---|--------------------------|-------------|-------------------|
| | Negative | 1 to 2 Plus | 3 Plus or Greater |
| Tree pollens | 50 | 40 | 9 |
| Spring grass pollens | 29 | 34 | 33 |
| Fall pollens | 39 | 37 | 16 |
| Flower pollens | 64 | 32 | 3 |
| Miscellaneous inhalants | 56 | 35 | 7 |
| Foods | 68 | 26 | 3 |
| Completely negative skin tests | 24 | | |
| Positive reactions to unrelated allergens | 18 | | |

The initial desensitizing dose was determined by intradermal serial dilution titration or by the ability of the patient to tolerate a given dose.

In nonreacting patients, composition of the antigen was based on the clinical history and the area of residence. In patients with positive skin reactions antigen composition was determined primarily through careful analysis of the history. Frequently in this group, however, aid was obtained from analysis of skin test results.

Good or excellent therapeutic results were obtained in most patients who had perennial pollen sensitivity by administering desensitization over relatively long periods at intervals of three to seven days. Fifty patients required two years of treatment or less, 37 two to four years and 13 four to eight years (Table 5). Premature cessation of therapy in many patients resulted in exacerbation of the dermatitis. It became apparent that failure to effect

TABLE 5.—*Perennial Pollen Desensitization—Duration of Therapy*

| | No. of Patients |
|---------------------|--------------------|
| 3 to 6 months..... | 2 |
| 6 to 12 months..... | 21 |
| 1 to 2 years..... | 27 |
| 2 to 3 years..... | 24 |
| 3 to 4 years..... | 13 |
| 4 to 6 years..... | 8 |
| 6 to 8 years..... | 5 |

Injections of antigen given every 3 to 7 days

partial or complete remission within a period of one or even two years should not discourage the continuance of treatment. Several patients who noted no significant improvement during the first one or two years of therapy, had the desired relief later.

Clinical results were excellent in 79 cases and good in 21. (*Excellent* denoted complete disappearance of the eruption; *good* was used when the eruption almost completely disappeared or was absent except for minor recurrences for one to four weeks each year.)

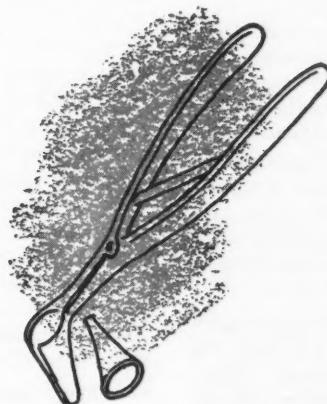
That tolerance of strong antigens is not necessary for a good or excellent clinical result was apparent. Seven patients were able to tolerate antigens no stronger than 1:5 billion; 27 no stronger than 1:50,000; and 16 no stronger than 1:500. Fifty patients tolerated dilutions of 1:50. Antigen strength was steadily increased according to patient tolerance. Exacerbation of dermatitis frequently necessitated reduction in dosage both in and out of the pollen seasons. Frequently significant dosage reduction was necessary during the pollen season. The efficacy of small doses of pollen, utilizing extremely

weak antigen dilutions as previously pointed out by others,^{1,3,9,14} was again emphasized by the experience in this series of patients with pollen dermatitis.

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How the Medical Profession Looks to the Layman

JOHN F. ALLEN, San Francisco

Editor's Note: The communication herewith already has had a considerable audience. It was first delivered in virtually its present form at a meeting of the California Society of Internal Medicine. Later, not substantially changed, it was given by the author before meeting of executives of the California Medical Association and component county societies.

Its presentation here reflects no editorial opinion either of advocacy or disagreement, but rather a belief that a willingness to look at ourselves from the point of view of respected observers outside our profession is a quite necessary part of public relations.

I WAS ASKED to talk to you about the public's attitude toward physicians in particular and organized medicine in general—as that attitude is assessed by one unquestionably interested and supposedly informed layman. Let me make my own position clear.

1. First of all, I'm far from being an expert on the subject of medicine; this business of covering medical stories constitutes constant learning, a never-ceasing postgraduate course which I find both challenging and satisfactory. However, I think I can say that in 25 years of covering everything from murder to medicine for newspapers, news magazines and press associations I have gained the status of expert in assessing what my fellow laymen think and how they react to various stimuli—and also what their aspirations are.

2. Please understand that in most of what I say here I am advocating nothing. I am reporting, interpreting the beliefs and reactions of laymen as they regard medicine, and what I think these beliefs and reactions portend for the future of medicine.

3. I'm sure that much of what I'll say will not come as news to most of you. And yet, to coin a cliche, many of us too close to our own professions cannot see the woods for the trees—and it often takes an outsider to bring into focus even the most obvious forests.

I was told that my talk here would not be considered a success unless I made most of you mad. I'm not sure I like this idea, because—to steal a quotation from my good friend and competitor, Milt Silverman—some of my best friends are doctors.

A talk made before the annual meeting of the California Society of Internal Medicine, at the Ahwahnee Hotel, Yosemite National Park, October 18, 1958.

More seriously, let me put it this way: I have enormous respect for most doctors as researchers and clinicians. I have considerably less respect for them—with some notable exceptions—as sociologists, economists and political scientists. I have almost no respect at all for what is largely and loosely called organized medicine.

Already I seem to have inserted in this pristine report some very personal opinions. I have voiced my personal views here largely because I'm sure they are shared by a great many—perhaps most—Americans. A number of studies have shown that most of those relatively few people who have (for "have" read "can afford") doctors of their own think their own doctors are magnificent and almost fault-free men. These same people tend to be suspicious of, if not out and out antagonistic toward nearly all other doctors. Furthermore, they sharply distrust medicine as an organized profession.

Why? If we can understand this ambivalent attitude of the layman toward you and your profession, we will come close to finding out what the profession is doing to harm its standing in the lay mind and what must be done to restore a rapport which once was unquestionably strong and vital.

The re-establishment of this rapport between medicine and the public is without question the most important of organized medicine's goals—and easily the most neglected and misunderstood. It is the major goal of organized medicine because, as I see it, socialized medicine (if you'll pardon the expression) is coming to the United States within the next quarter century as sure as such old standbys as death and taxes.

I don't intend to argue the merits or demerits of socialized medicine. I simply want to emphasize that I share the opinion of many thoughtful and unprejudiced people that within 25 years we are bound to have some form of universal, compulsory, prepaid medicine. In my mind the only question that remains is how it will be run and by whom: by you, as it ought to be, or by the Government, which should have a minimum of benign overseeing control. This is the heart of the matter.

I should hasten to say that I do not believe for a moment that the mass of the people share my opinion of the inevitability of socialized medicine. Most people don't even think about it, just as they don't think about any other big issues. Man in the aggre-

gate, as you will have noticed, has a very limited and self-centered horizon. He will accept the arrival of socialized medicine, as he accepts most social changes, with lethargy. He has accepted without a murmur of objection the undeniable presence in our midst of what is called—according to what pundit you read—creeping or galloping socialism. He doesn't like or dislike it particularly; he merely accepts it.

Which means, when you think it through, that you as doctors, that organized medicine, cannot count on any great amount of public support in your fight against socialized medicine—not even with the questionable help of Whittaker and Baxter.

May I remind you again that while the patients of each of you are your respectful and even adoring friends, they don't much like your colleagues and they suspect, with some reason, that your organizations are selfish, self-seeking pressure groups.

Please don't deceive yourselves. Socialized medicine may be a dirty phrase in your circles. It carries no such connotation to lay circles generally. "Free choice of physician" is a fine ringing slogan traded among you and uttered with religious fervor by your spokesmen. It means nothing to the vast majority of men and women. To many of them, of course, financial status prohibits any choice at all. To many more, income level limits choice without quite prohibiting it. And these are the people who account for the growing success and power of New York's Health Insurance Plan and California's Kaiser Plans. But, regardless of financial status, there remains the fact that most of us care not a tittle for free choice. We are—and you might be thankful for it—usually lost in a sort of magic worship of any doctor who treats us, whether we found him in the phone book or on a street corner.

"Third party medicine." You're against that, and quite reasonably so, I suspect. But don't expect that phrase to be a rallying cry around which public support can be formed for your fight. People mostly don't understand what it means, and likely wouldn't care if they did.

The point I'm trying to make, the warning I'm trying to give is that doctors, like many other groups, tend to sit around and sell each other on ideas already widely and basically held by the group—and then assume that everybody else thinks that way too. Most so-called public relations experts pander to this tendency and end by blinding you to the fact that you're leading a crusade without a following.

I find this inbreeding of belief—this contentment with selling the already sold—not only a major tendency in all professions or specialized groups, but the only apparent excuse for the continued employment of most public relations men. I mean the kind

who will tell you you're doing fine, when you're really only talking to each other.

Suppose now we examine some of the reasons for the deterioration of the respect in which the public once held medicine. I think it's fair to say that the public once regarded all of medicine, and all the men of medicine with the same degree of awed respect, of belief in their God-like omnipotence, in which the individual patient still holds the individual doctor.

Many things helped change this attitude, most of them beyond anyone's power to stop. The spread of education and knowledge certainly helped. A growth in cynicism was a factor. The educational campaigns of the voluntary health agencies helped.

But most of all, I believe, blame attaches to a deliberate and overt act on the part of medicine: the decision to launch a massive attack against the assumed threat of socialized medicine, and more specifically, the decision to place that campaign in the hands of a team of political persuaders-for-hire. I have always believed that the jobs Whittaker and Baxter did for the California Medical Association and the American Medical Association were the most damaging things that ever happened to medicine in high places and low.

Worse, the net effect was to strip from medicine and the men who practice it the last shred of mystery. Now the public saw them as the components of just another big pressure group, as human beings, selfish, even greedy—just like everybody else. To many this was a rude shock. To others, it was a challenge. We didn't like to be called Communists because we were not in full accord with everything organized medicine (or was it Whittaker and Baxter?) believed. Our backs went up. Some of them have never gone down.

The campaign had another end result, seldom noted, but vastly important. Let me explain it this way. In the newspaper profession, we are concerned, of course, with the laws of libel. Without knowing much law, a newspaperman becomes subtly and almost subconsciously aware of what constitutes libel in each case. He knows, for instance, that it is pretty hard to legally libel an actor or a politician. The point is that the actor or politician deliberately seeks publicity (is anxious and willing to be favorably mentioned in the public press), so he can expect less help from the courts when his publicity turns sour. The citizen who lives quietly and does not seek "public preferment" in the press has a much greater right to seek legal redress when things go wrong and his privacy is invaded or his motives called into question. And so it is now with doctors. So long as they, or their organizations kept out of the public prints they could expect and were treated with considerable restraint when it came to reporting their wrongdo-

ings. However, after a group has spent millions of dollars deliberately seeking public preferment in the press and elsewhere, it can hardly expect to still be accorded the restraint shown a self-effacing citizen.

On one side of the communications coin the doctor has, through the dissemination of favorable news about marvelous new medical and surgical treatments and techniques, been pictured as one of the great men of our time. On the other he has been held up as a man very likely to lie about his income to the tax collector, a man who will not police his professional colleagues, the member of a greedy lobby, a part of the country's strongest labor union.

Why is the latter picture in sharper focus than the former in the eyes of the public? For one answer we go back again to the point that each patient loves his own doctor, and tends to personify all the good of medicine in one man. For another, the layman expects the worst of most people; he expects the best of medicine, and when he doesn't get it he is hit harder and remembers longer. What are the sort of things that hit him hard, that he remembers? Let me list a few that have come to my attention.

Many of you will recall that in the early 1930's, at the depth of the last great depression, the California Medical Association twice officially plumped for legislation that seems to have had a rather deep tincture of "socialized medicine." In two different years the C.M.A. officially lobbied in Sacramento for a statewide *compulsory* health insurance plan. Only the opposition of the farm lobby beat the plan in the legislature.

There are many others who recall those incidents. And what are they to think? Is organized medicine's stand against socialized medicine a matter of deep and abiding principle? Or is it merely a matter of selfish economics? Does organized medicine mean to fight socialized medicine when times are good and patients plentiful, embrace it when times are bad and patients hard to come by?

People tend to remember, too, that organized medicine—no matter what it may say today—fought consistently and bitterly against all health insurance schemes once times grew better. Medicine, as it is embodied in the C.M.A. and the A.M.A., gave in grudgingly only when it seemed that some sop must be thrown to the public to head off the proponents of socialized medicine. Now we have in the form of Blue Cross and Blue Shield plans completely inadequate insurance coverage, for which the A.M.A. and its affiliates take full credit, and about which they boast in terms of statistics which are as misleading as they are glowing.

The record of the A.M.A.'s fight against group, closed-panel medical plans—particularly those organized by unions—has not been a pretty one, with

some of its blows both morally and legally below the belt.

The medical profession, like the legal profession, has notably failed to keep its own house in order. Charges of ghost surgery, fee-splitting and the removal purely for profit of healthy tissue—charges made by the American College of Surgeons—brought only indignant cries of denial and attempts to kick the surgeons responsible for the charges out of organized medicine.

Organized medicine has notably succeeded in giving the public impression that it is fighting a last-ditch stand against all social advance and that it is chiefly concerned not with its boasted first principle of healing the sick, but with lining its pockets. This is, I hasten to say, a false impression in most instances, but it is one that medicine too often makes.

I will cite you a significant example. During the annual meeting of the California Medical Association in Los Angeles in 1958 the chief concern of the House of Delegates was the Old Age Assistance program, which any sane man will agree is a poorly written and awkwardly administered law. (I think also that most men of good will would admit that some better form of the same program is necessary and desirable.)

As those of you who were there will recall, the attack on Old Age Assistance came from all directions, in the form of dozens of resolutions. The final resolution, as formulated by committee and kicked around on the floor of the house, was one really of complete negation, since all its other facets were overshadowed by a demand for repeal of both the federal and the state laws which made the program possible.

At this point in the proceedings I was happy to hear the voice of reason, in the person of John Cline and a few others, arise. The plea was sensible and reasonable and the public reaction to it would have been good: Let us amend the resolution to read that the C.M.A. offers its help in the writing of a better substitute law.

But the plea was shouted down. The last-ditchers won by an overwhelming majority. Reason, good public relations and even any faint semblance of humanitarian concern went out the window. Anyone observing that session of the House would not even have guessed that doctors of good will in a number of counties were even then testing pilot plans in an effort to make Old Age Assistance work.

One of your number who is here today came across the floor of the House of Delegates that afternoon to the press table and sat down beside me. "I wish," he said, "that you did not have to be here today, that you didn't have to report this."

I wished so too. It is not pleasant to have to write of apparent greed and callousness in a profession I

respect above all others. The picture could, of course, be softened by explanation, by setting the episode in its proper perspective, but I'd be something less than true to my own profession if I'd tried to hide the fact that this was a pretty nasty show.

I much prefer to write about medicine in terms of the great and selfless researcher in his laboratory, the intuitive diagnostician displaying his skills and the healer at the patient's bedside. But the other aspect of medicine is forced upon me, and hence upon my readers.

Can anything be done about this aspect of medicine, about the public's attitude toward the profession, as represented by its organized bodies and spokesmen? My real duty is to see and report, but in this instance I hope I may be excused if I do a little editorializing—excused on the grounds that I am generally considered a good friend of medicine.

You might well ask why medicine should bother to be popular in the eyes of the public if I am right in assuming that socialization of medical care is inevitable. I think it makes all the difference in the world, the difference between a proper plan run by doctors for their patients, or a plan shoved down the throats of both. I have a great deal more faith in bureaucratic democracy, a great deal less fear of my own government than most people profess. I still would prefer to see medicine run by physicians.

Let me then make a few editorial suggestions:

1. I strongly suspect that the voice of organized medicine does not truly represent the majority of the profession's practitioners. So I would strongly urge that the rank and file of a great profession take a far more lively interest in their societies and associations.

I say this fully realizing how busy most of you are. I say it in the full realization that too many organizations—my own union, the American Newspaper Guild, is no exception—are run by inferior people simply because the superior are either too busy to care or have simply taken to shrugging their shoulders and muttering: "What's the use?"

The way up in the A.M.A. is over a rugged and undemocratic road, but such organizations have been changed by a revolt of the rank and file before, and will be again.

2. If you're not in favor of a major revolution or feel it cannot be accomplished, then let me at least urge a smaller and more precise revolt. Organized medicine's view of public relations—of what it is designed to accomplish, and toward whom it ought to be aimed—is false and stupid. Public relations is not at best a science; and too often it is practiced as a dark—maybe satanic—and subtle art. Much of the sort of public relations you are paying

for in your organized groups is in many respects a waste of money.

You have heard iterated and reiterated one version or another of a slogan that is the medical public relations man's pet these days: "Public relations begins with you and your patient." This, I submit, is utter nonsense—and a dangerous concept. We have already seen that the relationship between the individual doctor and his patient is the one area where rapport is excellent.

This is an area which is yours and your patient's, where the relationship is purely individual and, although I hesitate to use the expression, almost spiritual. It is no place for public relations gimmicks, for cute little cards on your desk or for tissue paper "programs" based on car window observations by ad hoc psychologists. It is a relationship that is simply not amenable to public relations. Dealing with this relationship as though it is in any way a public matter will ruin it—if anything can.

Tell the public relations men to keep hands off; tell them to work out on the boys who really need refurbishing in the public's eyes: the leaders and spokesmen of organized medicine.

3. One more point. You or someone else must see to it that organized medicine comes to represent some things that are progressive and positive, not simply those things which are old and negative. Life moves on, but medicine continues to give the impression that it is fighting a last-ditch stand against progress, that—in the words of Adlai Stevenson—it had to be dragged kicking and screaming into the Twentieth Century.

To most of us the straight fee for services method of practicing medicine is outdated and uneconomic, and is bound to be supplanted. If medicine does not find a substitute for that method then someone else will do it for medicine.

I don't know the answers, but it seems to me you have them available, at least for trial. Modern health insurance is overpriced and inadequate, yet there are better plans available, which organized medicine either ignores or damns. Why, for instance, isn't the A.M.A. solidly back of such excellent ideas as the San Joaquin County Plan? Why isn't it pushing, instead of attacking, efforts to bring good medicine to the Automobile Workers, the Miners and the Steel Workers?

The point of it all seems to be this: No matter what it thinks of the brave new world that looms ahead, no matter how it may despise undeniable trends toward social living, organized medicine is doomed to a future of Federal control unless it chooses to lead instead of dragging its heels.

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Analysis of Absenteeism in Industry

E. P. LUONGO, M.D., Los Angeles

ABSENCE FROM WORK among the employed population is a subject of increasing concern in medical, management, labor and government circles and in various community organizations. Numerous and energetic attempts are being made to discover and understand the causes of excessive cost of sick pay benefits, and to apply effective methods of control and remedies. Over the years, an appreciable body of literature has been developed in the United States dealing with medical, economic and sociological aspects of this problem. Each such contribution, while helping to explain the nature of segments of the problem has, at the same time, led to some confusion through presenting differing definitions, measurements and attitudes toward absence.

Those interested and responsible for control of absenteeism in industry must take an objective attitude toward the problem. It will be difficult to obtain satisfactory results by approaching the problem with irritation, prejudice or anger.

Management Opinions

There is a wide divergence of opinion among management men as to the nature and extent of the problem. Asked to give what they consider to be the most common causes of absenteeism and tardiness, 98 executives listed the following causes. Since most of them marked several reasons, the total percentages take into consideration all responses:

| | |
|-----------------------------|-------------|
| Sickness (Real) | 80 per cent |
| Sickness (Imagined) | 70 per cent |
| Home Problems | 65 per cent |
| "Don't Care" Attitude | 35 per cent |
| Poor Supervision | 28 per cent |
| Transportation | 20 per cent |
| Accidents | 12 per cent |
| Drinking | 8 per cent |
| Weather Conditions | 6 per cent |
| Personal Business | 6 per cent |

Truancy as a Factor

While truancy can be considered a factor in absenteeism, it must be treated as a symptom of human behavior. It would be interesting to know the number of persons who were truant from school and later were truants in work situations. Such a study might help us to prevent industrial truancy by find-

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• There are many nonmedical factors that contribute to employee absenteeism in industry. An employee's total life situation or total environment may be a causative factor in excessive "sick absenteeism." In many instances the cure for "abnormal" sickness absenteeism is within the province of supervisory personnel, who should look upon abuse of sick leave benefits among employees as morale problems and as evidence of possible maladjustment to the demands of the job or the industry. There are, however, many problems in mental and physical health affecting absence rates in which preventive psychiatry and medicine can make greater contributions. Even truancy and malingering may sometimes be conditions requiring professional medical care.

The role of a private physician in determining and certifying the true state of a patient's health is a most important one economically to industry and the community. The total problem of absenteeism for sickness, as it exists in industry today, points up the need for the most effective cooperation and communication possible between industrial and private physicians. Since no more than 25 per cent of the total work force is employed in industries having in-plant medical programs, the burden of responsibility for the control of absenteeism for sickness rests mainly with private practitioners.

ing common individual and environmental problems in the industrial and school situations. In this connection, Chart 1 shows the number of one-day absences in March, 1958, distributed by days of the week, in an industry employing close to 6,500 employees. This shows more absences Mondays and Fridays than in the middle of the week. A larger sample than one month's absences is necessary for significant conclusions, but analyses of this type can be important in finding hidden costs of absenteeism due to alcoholism.

The Effect of Shift Work

Some physicians and laymen are of the opinion that ill health is more frequent among workers on night shifts than it is among day workers, particularly in the form of nervous diseases and gastric disorders, including gastric and duodenal ulcers. It is also maintained by many observers that heart disease, particularly coronary occlusion and angina pectoris, is more frequent among shift workers than among day workers.

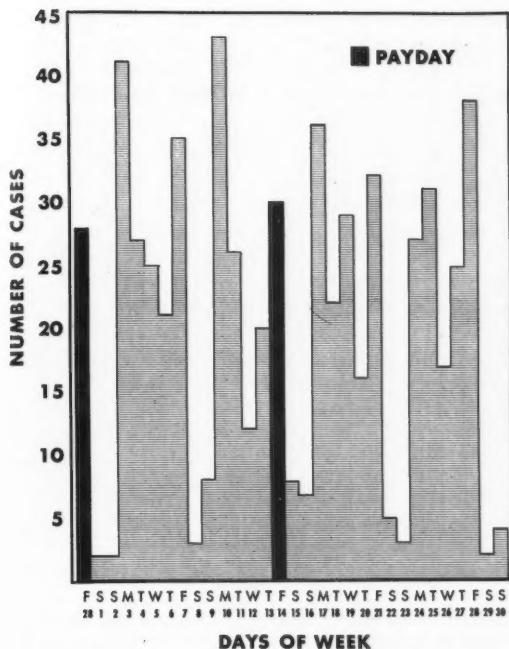


Chart 1.—Frequency of one-day absences in one month (March, 1958) in an industry having about 6,500 employees.

Exhaustive studies were carried out in Sweden both with regard to the current practice of shift rotation and with regard to finding out what is the most desirable practice. The results showed that the absenteeism of the day workers was greater than that of shift workers. The difference averaged about 1 per cent—that is, one working day per hundred working days. This difference was not a chance one, as the observations were carried out over a long period, the investigation material was considerable and the result was the same year after year. The conclusion was that general ill health was no more frequent among shift workers than it was among the day workers.

Age is another factor of the problem; absence for illness was nearly three times as great in the 60-and-over age group as in the 20 to 38 age group.

The author attempted to study samples of one and two-day absences among employees of an oil refinery for the first six months of 1953. The highest incidence of these absences was in the lower age groups, more particularly between the ages 31 and 35. At the age of 40 there was a sharp decrease in these short-term absences. It appeared that the largest number of one and two-day absences was in the younger employees with less service; also in the group between the ages of 20 and 35 there was a significant number of one and two-day absences

following days off. These short-term absences represent an important factor in cost for sick leave.

The author looked at the problem recently from the standpoint of job classification. Data on the previously mentioned refinery showed, generally, that administrative and supervisory and professional and technical employees have a relatively low incidence rate (cases per employee .53 and .80, respectively, for male employees), while clerical employees and skilled employees have incidence rates of 1.85 and 1.82, respectively, as compared with the aggregate of 1.62 for the total male population. Unskilled employees (usually younger), however, had a short absence incidence rate of 2.78—appreciably higher than the population total.

Administrative and supervisory employees (usually older), on the other hand, had the highest severity rate (5.77 days per absence), while the remaining classes had average absences ranging from 2.92 days to 3.29 days. The highest rate of total days lost per employee was in the unskilled classification; male employees in that category lost an average of 9.16 days last year. This compared with only 3.05 days for administrative, 2.34 for professional, 5.74 for clerical and 5.79 days for skilled employees.

The problem of repeated short-term absenteeism must be distinguished from long-term absenteeism, since the latter practically always is due to illness, while the former can be mainly a symptom of human behavior (see Charts 2 and 3). This symptom usually is related to problems of the employee on and off the job and these problems frequently are not strictly medical. In the younger age group, most repeated short-term illnesses, especially the one-day absences, become problems of audit primarily for supervisors and foremen and secondarily problems of medical evaluation.

Employment of Older Persons

Now that more elderly people are being employed, it will be to industry's advantage to secure more information and data concerning the physical and mental health of older persons, as a means of reducing long-term absenteeism of this group.

Absentee Proneness Variations Due to Organic and Psychosomatic Factors

All physicians are familiar with certain physical disabilities that might affect an employee's attendance and performance on a job. Some people are more susceptible to certain psychosomatic diseases and are more prone to sick absenteeism than others—their pain and stress thresholds are lower than for the average. Investigations definitely indicate that where a person is prone to stress and nervousness he is also, as a rule, prone to digestive troubles and sick absenteeism.

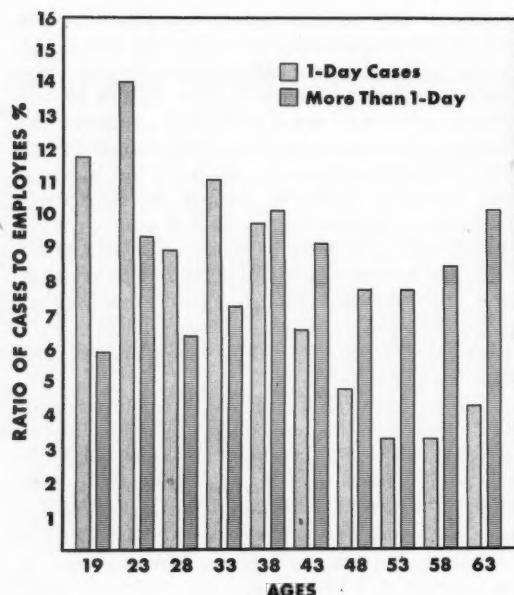


Chart 2.—Data on one-day absences compared with longer term absences in a one-month period among male employees of a company having about 6,500 employees.

Many people because of sensitive nervous systems and "fragile" ears cannot stand the noises of clattering machinery. This aversion to noise may be increased in men who have been subjected to severe bombing and artillery fire during military service. Such persons build up tension over a period of time while working, and periodically must take time off from work because of fatigue.

The Effects of Epidemic or Endemic Respiratory Diseases

The outbreaks of "Asian influenza" in 1957 and the production of large amounts of vaccine with which to stifle any threatened epidemic of this disease, aroused great public interest. Many industries, fearing a dislocation of their operations if any appreciable proportion of their employees is disabled at any one time, are still discussing whether or not they should endorse, or participate in, mass inoculations with influenza vaccine. Unusual public interest in the epidemic of 1957 focused attention on industry's public health responsibilities in the realm of prevention of communicable disease generally.

The total impact of the epidemic turned out to be relatively mild. As measured by excess mortality, it was only slightly more severe than the 1953 epidemic of influenza A prime, and was considerably less severe than the 1943 epidemic of type A influenza.

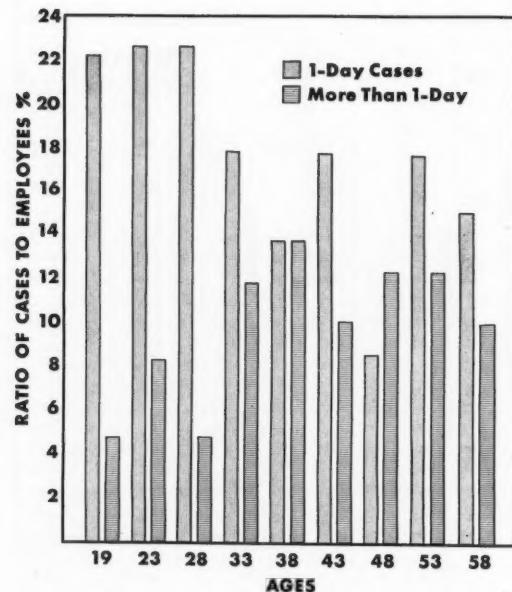


Chart 3.—Data on one-day absences compared with longer term absences in a one-month period among female employees of a company having about 6,500 employees.

As measured by morbidity, the epidemic was extensive. Essentially the whole country was affected. Absenteeism seemed to be highest in school children. Many industries felt the impact, but there were few reports of community disruption or serious interference with productivity or essential services.

The new respiratory viruses surely deserve some mention in any discussion of absenteeism and the epidemiological aspects of respiratory disease. Ten years ago the influenza viruses and psittacosis were virtually the only known respiratory viruses, but now, thanks to the tissue culture methods, a profusion of adenoviruses, Coxsackie viruses and various myxoviruses and hemagglutinating agents have been associated with respiratory infections.

Many other viruses have been described and related to human infection through the demonstration of specific antibody responses, and to a less definite extent they have been related to human disease.

Although all the principles for the recognition, isolation and prevention of virus infection have been established, the extent and nature of the causes of the majority of mild respiratory illnesses causing industrial sick absenteeism must still be sought.

Environmental Factors On and Off the Job (Psychologic)

Excessive worry because of difficulties on the job, in the home or in the community, or because of personal conflicts with supervisory personnel or

other workers, frequently results in absences from work. The anxieties and worries of employees cannot be ignored by supervisors. It is important for supervision to have a working understanding of human behavior. In this connection, a recent study revealed that more men in blue-collar work groups with low absence rates than with high absence rates reported that their foreman usually or always had enough time to see them when they wanted to talk about something personal.

Employee dissatisfaction is a question of attitude and can affect absence rates. Usually this dissatisfaction is limited to the employee concerned. However, it may affect one individual, become contagious, and pervade a whole group. We then have an industrial unrest with poor morale, and increased labor cost may be directly proportional to the morale of the employees.

In a recent study of a group having the highest absence rate, only one-fifth of the men were "very satisfied" with the company and their jobs as a whole. Half or more of the men in the other absence groups were very satisfied.

Even though employees get their checks from their company, the individual supervisor or foreman often represents the company to most employees. Supervision and management must recognize certain emotional hazards that destroy morale and efficiency and may cause discontent not only in individuals but in groups of employees, and conceivably could come to general grievance against the employer.

Specific Emotional Hazards of Employment

What are some of these emotional hazards in employment? They can be classified briefly as insecurity, anxiety, worry, fear and discontent. An employee who feels that he is not wanted develops a sense of insecurity. This insecurity can only be overcome by making him feel that he means something to the office and the company and is not just a "wage plug." Studies reveal that more men in the lower-absence groups feel that they are a real part of their group and are included in all its activities. In groups with low absence rates, more men feel that their group has team spirit and is better than other groups in getting the job done.

Work attendance is also related to how much a person likes his work. There was a time when to all good craftsmen and artisans the pride of accomplishment was the dessert of the feast. Getting paid enabled them to buy the bread. In the evolution of industrial processes, this has all changed. Today the master is separated from the servant and the servant, more and more, from the product of his toil.

More men in low-absence groups feel that the company recognizes good work the employees do

(94 per cent in the low absence-rate group as compared to 54 per cent in the high absence-rate group).

The Problem of Alcoholism

Reliable, up-to-date information about alcohol and "problem drinkers" was presented in a recent report of the National Industrial Conference Board, Incorporated. Attention was focused on how excessive drinking creates and aggravates different company problems. It was found that problem drinkers miss work about twice as often as other workers, and report late for work more frequently.

Attendance figures for 16 alcoholic workers in a plant near Boston were studied. The men lost a total of 4,368 hours of work during one year, or an average of almost three 8-hour days per month each. These figures show the loss of time for alcoholism alone, and do not include time lost for ancillary complaints. Also, they show only a one-year experience after the men had been identified as alcoholics and treatment had been instituted. It is estimated that these men had been problem drinkers for at least five years before the time of the study.

Possible Solutions

Efforts on the part of supervisory personnel to reduce short-term absenteeism must embrace not only conditions on the job, but in the workers' environment away from the job. Satisfactory results are not to be obtained by slapping workers on the back, coddling them or being overindulgent. However, more time can be spent with chronic short-term absentees in pointing out the importance of their particular task in the unit to which they are assigned and questioning the employee with regard to his emotional reaction to the job and his home environment. Another approach for supervision is to give appreciation and credit to the employees who are regular in attendance.

Perhaps the most effective check on abnormal absences from work is a constructive attitude on the part of the employee's immediate supervisor. If he seeks and finds patterns to absenteeism he will be getting closer to the real causes. It might be absence on days when the employee knows a certain type of work is coming up that he doesn't like to do. It might be Monday for the drinker, or special shopping sales days for the women employees, or time off to attend funeral services of friends or relatives. If the supervisor can find the *real* reason by studying the employee's record over a period of time, he can better determine the remedy.

The Positive Approach

It is generally agreed that a positive approach to solving the problem is more effective than a negative

approach. Appeals to the employee's sense of fair play, his importance to the work group as a whole, chances for advancement and more money, are felt to have more real effect on the worker than threats of discipline and punishment.

This does not exclude, however, the very vital part good record keeping and adequate supervision play in holding the rate down: For instance, I-T-E Circuit Breaker Company of Philadelphia has "reduced the absence rate from approximately 5 per cent to less than 3 per cent by use of record cards and annual reports."

The following are among the items suggested by the Committee on Medical Care for Industrial Workers of the American Medical Association for inclusion in sick absence records in individual or consolidated [group] records and reports. They do not preclude the addition of other items considered necessary by individual physicians or companies for other types of analyses:

1. Name or identifying number
2. Sex
3. Marital status
4. Department
5. Occupation
 - a. Managerial and supervisory
 - b. Clerical and sales
 - c. Skilled
 - d. Semi-skilled and unskilled

Salaried
Production
(hourly)
6. Length of service with company
 - a. Less than 1 year
 - b. 1 to 4 years
 - c. 5 to 9 years
 - d. 10 to 14 years
 - e. 15 to 19 years
 - f. 20 to 24 years
 - g. 25 and over
7. Date of beginning of absence
8. Date of returning to work or other termination
9. Duration of absence in calendar days
10. Date of birth
11. Age group
 - a. Under 25
 - b. 25 to 34
 - c. 35 to 44
 - d. 45 to 54
 - e. 55 to 64
 - f. 65 and over
12. Diagnosis
13. Classification
 - a. Nonoccupational illness
 - b. Nonoccupational injury
 - c. Occupational illness
 - d. Occupational injury
14. Number of days of paid sick leave allowed

15. Calendar days of absence

- a. 1 day
- b. 2 days
- c. 3 days
- d. 4 to 7 days
- e. 8 to 14 days
- f. 15 to 28 days
- g. 29 to 49 days
- h. 50 to 91 days
- i. 92 to 182 days
- j. 183 days and over.

We mentioned earlier that repeated one or two-day absences are problems of audit primarily for supervisors and foremen, and, secondarily, problems of medical evaluation. However, supervision must be furnished effective statistical tools in order to carry out this type of control, as in the case of the Gillette Company, whose control system includes:

- A. Control by line supervision
- B. Use of reports:
 1. A summary monthly absenteeism report is made up for the company president and operating department heads.
 2. Charts are prepared and distributed to department foremen showing absenteeism, tardiness and "early quits" by department. Also shows male and female employee comparisons.
 3. Quarterly reports listing employees and number of occasions absent are sent to each department head.

Use of Visiting Nurses and Other Home Checks

Still used by over 60 per cent of industry is the system of visiting nurse service or of telephone and home checks on absence and tardiness cases. The job usually is a function of the personnel department, which checks on absentees each morning to see how they are and when they will be back. A personnel director of a New England sheet metal plant reported: "Home checks may be old as far as control techniques go, but we have found they are still one of the most effective tools for spotting absence violators. Care must be taken to avoid 'snooping,' and if the calls are made in a friendly, yet businesslike manner, employees appreciate the company's interest in their welfare." A medical department in industry must exercise a great deal of caution and propriety if it is brought into this type of activity.

It is important for industrial physicians, industrial nurses and physicians in private practice to understand and appreciate the patient's emotional fibre and personality in considering the symptoms, etiology and the treatment of illness. Such considera-

tion will shorten the period of convalescence and probably will eliminate some of the fancied illnesses as a cause of absenteeism. You may even prevent a worker from developing a gastric ulcer because of the attitude of a supervisor or a foreman.

Role of Psychiatrist in Large Plants

In industries with large employee plant populations (10,000 to 15,000 and over), a psychiatrist can increase his contribution toward remedying the problem by working with supervisory personnel as well as with individual workers. The greatest problem is how best to utilize our present knowledge of psychiatry and mental hygiene practically in a functional industrial program. It is at this point that psychiatrists and mental hygienists must retool their knowledge for industry in a practical fashion so that we may learn to recognize and learn how to handle and treat the disturbances of people within the industrial environment.

One industrial psychiatrist reported that in the presence of foremen he meets and has discussions with workers who have been absent. This has proven valuable in giving foremen a more comprehensive understanding of the worker, and in turn the worker understands that the foreman is the first source of contact when difficulty arises. The psychiatrist further suggests that workers voluntarily approach the foreman and ask for an opportunity to "talk with the Doc" again. Perhaps the best indication of the effectiveness of this method is the foreman's statement, "Got another one for us to talk with, Doc!"

Key Role of Foremen and Supervisors

Foremen are in a position to give real assistance in discovering and treating the symptoms of absenteeism. Supervisors who are easily available to the employees are in a better position to find out about their personal problems. They can give appreciation and credit to the men and women who are regular in attendance. They can take a personal interest in eliminating specific causes of absences or unreported absences. They can impress upon employees the importance of reporting necessary or unavoidable absences in advance. They can cooperate with the other departments and help correct misunderstandings or errors which may occur in connection with excused or authorized absences.

Preventive Medicine and Respiratory Disease

We are on the verge of a great revolution in our thinking about the etiology of respiratory diseases. The hope of control lies in the development of multiple antigen vaccines.

A study by Eastern Air Lines showed some serologic results obtained in a study employing Asian

influenza vaccine. They indicated antibody response varying in accordance with the amount of virus injected. The best responses were experienced following two injections. There were indications that the vaccine provided some protection, as judged by the reduction in absenteeism owing to respiratory illnesses.

Adenovirus immunization is not indicated in any but recruit camp populations. A vaccine containing type eight adenovirus might forestall large epidemics of keratoconjunctivitis such as have occurred in shipyard and other workers in the past.

As preventive measures against respiratory disease do become available through scientific research, industry is in a position to reach a considerable segment of the adult population.

To vaccinate or not to vaccinate—that is the question facing many company managements. The indecision of company managements stems from the many contingencies connected with mass group vaccinations, such as conflicting opinions of health authorities regarding the need.

The particular industry's decision on whether to do so will be governed by many factors which include costs, anticipated results, company policy and the potential threat of an epidemic. Perhaps one of the most important considerations will be the possible impact of the disease on the productive capacity of the industry and the significance of this to the welfare of the public which it serves.

Long-Term Sickness

So far this communication has dealt with the problems of short-term absenteeism in industry. The answer to the problems of long-term sick absenteeism lies in periodic health evaluation of employees, both young and old, under a preventive health maintenance program sponsored by management. Reliance must be placed on the earliest possible detection of incipient disease. The results of such a program are worth while, but must be evaluated on a long-term basis over a period of years.

Important Role of Off-the-Job Safety Program

The increasing number of long-term absences due to injury away from the job, is becoming a serious problem to most employers from the standpoint of time loss from the job (almost twice the severity rate of most illnesses), permanent disabilities among employees and costs in sick leave. These losses are frequently compounded by litigation in the courts. Many employers have begun to pay some attention to the problem by integrating preventive programs for off-the-job accidents with their regular industrial safety programs.

The Small Plant Problem

The greatest number of men and women in the country are employed by small plants and corporations. Some of the ideas which have been suggested may be impractical or too costly for them to utilize. The alternative, for positive action, is for small plants in an area to pool resources and thereby secure the desired personnel to solve their particular problem on sick absenteeism.

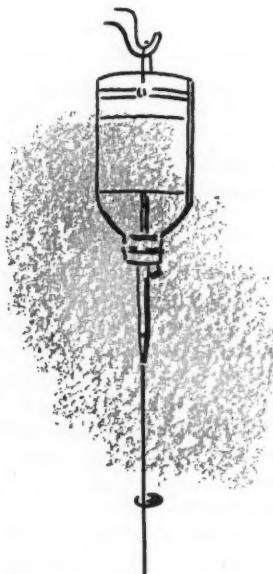
Responsibility of Physician in Private Practice

The private physician, by virtue of patient-physician relationship, is properly a champion and advocate of his patient's welfare. However, in cases of illnesses of his patients, he is frequently called on to certify their disability at a time when they have recovered and present no objective findings on which to validate the illness. In many situations the private physician must face one of several possibilities: an irate patient; loss of the patient's confidence; or unwittingly becoming a partner to some

unjustified claim of illness. In some cases the certification of personal illness by a private physician is expected by the patient upon the basis of economic rather than strictly medical factors.

Industrial physicians must look with equanimity upon matters concerning the certification of illness. They have found that in the majority of questionable cases, personal contact with the private physician explains and justifies many situations which are not justified on paper. I need not emphasize that "rubber stamp" certifications by private physicians are not only costly to the employer but are harmful to morale and make no contribution to the worker's mental health. There are some cases in which we must recognize "the adult version of the boyhood headache allowing baseball on Saturday but preventing church on Sunday." Close cooperation of private physicians and industrial physicians can help to maintain smooth patient relationships in these difficult situations and reduce cost of illness to employers and community welfare agencies.

612 South Flower Street, Los Angeles 54.



A New Noncrushing Intestinal Clamp

HAROLD MASTERS, M.D., Beverly Hills

IN SURGICAL OPERATIONS entailing an opening in the intestinal tract, there is always the problem of preventing spillage of intestinal contents. The "soft" intestinal clamps now generally used are straight or slightly curved instruments 8 to 12 inches long. They are adequate if the involved intestinal loops are mobile and easily exposed but are of limited value if exposure is restricted and space limited.

For example, one of the problems faced in low anterior resection of the rectosigmoid colon is the prevention of spillage from the proximal portion of the colon while anastomosis is being done. The standard straight or curved "soft" intestinal clamps, owing to their shape and size, tend to twist or sharply angulate the proximal colon when attempt is made to bring it down into the depths of the pelvis. One attempt that was made to avoid this distortion and angulation of the proximal colon during anterior resection was the development of right-angle intestinal clamps. Now in general use, these right-angle clamps have handles 10 to 15 inches long to permit either the operating surgeon or an assistant to manipulate the colon for easier placement and suturing during anastomosis. However, the length and weight of such clamps are definite drawbacks; they are in the way during earlier stages of the operation. In addition right-angled instruments of this type are particularly suited only to anterior resections and can be used only rarely in other parts of the abdomen.

It appeared, therefore, that a more applicable instrument would be a light, noncrushing clamp with a small handle. Such a clamp would not take up too much space when used in anterior resections of the colon and indeed could be used anywhere within the abdominal cavity where occlusion of the intestine was needed, space was limited or exposure poor. Ideally, the instrument could be applied as simply as a

bull-dog clamp is applied to a blood vessel in vascular operations.

With these requirements in mind, the intestinal instrument pictured in Figure 1 was designed. Weighing less than 2 ounces, it does not restrict the mobility of the bowel. It can be made with blades of different lengths. Those pictured are 3 inches long. As the surfaces that clamp the intestine are a half-inch wide, the pressure is distributed over enough area not to damage the intestine while the clamp is in position. As the instrument is being closed, the tips of the blades meet first, then the main body of the surfaces come together as slightly more pressure is applied. Longitudinal serrations to prevent slippage make cloth or rubber coverings for the jaws unnecessary. The handle of the instrument, being at right angles to the jaws, lies parallel to the bowel during actual use.

This instrument has been used in a large number of intestinal operations and has been found to overcome many of the difficulties noted with the use of clamps of the kind formerly employed.

435 North Roxbury Drive, Beverly Hills.

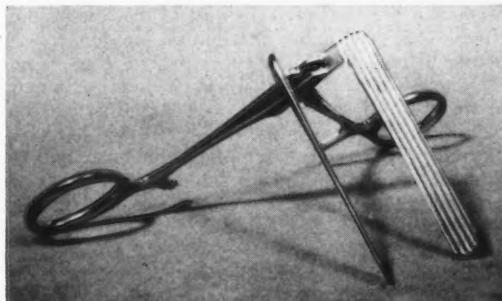


Figure 1.—New style, lightweight intestinal clamp in open position showing wide, serrated surface of blades which are set at right angle with shafts. (The instrument is obtainable from V. Mueller and Co., Chicago, Illinois.)

Submitted May 25, 1959.

CASE REPORTS

Ratbite Fever Due to *Streptobacillus moniliformis*

A Report of Two Cases

WILLIAM A. BURKE, M.D.,
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RATBITE FEVER due to *Streptobacillus moniliformis* is also known as Haverhill fever and erythema arthriticum epidemicum. Although the disease is transmitted to man by the bite of an infected rat or other rodent, it may also be acquired from contaminated food and milk. The causative organism is a normal inhabitant of the nasopharynx of rats, but is highly pathogenic for mice. In human beings it is the cause of one kind of ratbite fever, characterized by fever, rash and polyarthritis. The incidence of ratbite fever is highest among infants and children.

Ratbite fever due to *Streptobacillus moniliformis* has been reported from all regions of the United States but is extremely rare west of the Mississippi River. This geographic distribution, no doubt, is a matter of recognition and reporting, for there is no reason to believe that this worldwide disease is new to the western section of North America. To the best of our knowledge, the cases presented here are the only two proven cases of ratbite fever due to *Streptobacillus moniliformis* among residents of Los Angeles County. In 1950 at the Los Angeles County General Hospital another case of the disease was diagnosed by cultural studies, but the patient was a transient who had been bitten by a rat in Stockton, California, three days before he was admitted to the hospital.

REPORTS OF CASES

CASE 1. A 3-year-old white boy was admitted to hospital February 19, 1957. He said that he felt sick all over and his parents described pain and swelling in the right knee. He had complained of pain in the knee three days previously and his mother had noticed he was limping. A physician who was consulted noted a morbilliform and petechial skin eruption on the buttocks. This rash did not fade when pressure

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Submitted July 10, 1959.

was applied to the area. No evidence of trauma, swelling or inflammation was observed about the knees, but next day when the patient was reexamined a definite swelling was noted in the right knee. The rash had spread to the lower trunk and the arms. Orthopedic consultation was obtained. No abnormalities were seen in roentgenograms of the right knee. Immobilization of the joint was advised. On the day of admission the patient vomited once, was drowsy and showed general malaise.

The past history was noncontributory. The patient was a well developed and well nourished boy. He appeared lethargic but not in distress. The temperature was 99.6° F., the pulse rate 100 per minute and respirations 25 per minute. The distribution of the rash remained the same, but a few areas were purpuric. The right knee was swollen but not red or hot or limited in motion.

Hemoglobin content was 11.1 gm. per 100 cc. of blood. Leukocytes numbered 12,000 per cu. mm.—with 74 per cent neutrophils, 15 per cent lymphocytes and 11 per cent monocytes. A slight degree of anisocytosis was noted in the erythrocytes. Platelets appeared normal in number. The urine was positive for acetone; the sediment contained 0.2 leukocytes and one erythrocyte per high power field. A Gram-stained specimen of the centrifuged sediment showed no definite organism. *Pseudomonas aeruginosa* and gamma *Streptococcus* grew on a culture of urinary sediment. The stool specimen was described as soft, yellow, mucoid and with no visible traces of blood. A fecal culture grew an organism belonging to the Coli-Aerogenes group. No organisms of the *Salmonella-Shigella* groups were isolated. A blood culture taken on the day after admission, produced no growth after 16 days of incubation. The blood antistreptolysin titer was within normal limits. The C-reactive protein showed a moderately positive reaction. The corrected blood sedimentation rate was 47 mm. in one hour. On the seventh hospital day it decreased to 19 mm. in an hour. Results of macroscopic blood agglutination tests for typhoid "O," typhoid "H," paratyphoid "A," paratyphoid "B," proteus OX19 and *Brucella abortus* were negative. A first strength intradermal tuberculin test showed no reaction.

Throughout the hospital course the patient remained afebrile. On the second hospital day there was minimal enlargement of lymph nodes in axil-

lary, cervical and inguinal areas. By the third hospital day the swelling in the right knee had subsided completely, while by the sixth day the skin lesions and enlargement of lymph glands had also cleared. The child appeared alert and happy and became active. On the eighth day he was dismissed untreated and without diagnosis. During his stay in hospital two serum specimens (taken six days apart) were sent to the California State Department of Public Health for agglutination studies* for ratbite fever due to *Streptobacillus moniliformis*. Six weeks later the results were reported "positive" as follows:

Specimen drawn February 21, 1957, positive in all dilutions 1:20 through 1:160; negative dilution of 1:320.

Specimen drawn February 27, 1957, positive in all dilutions 1:20 through 1:160; partial reaction in dilutions 1:320 through 1:2560.

A third specimen requested by the same laboratory (drawn April 22) was reported positive in dilution 1:640 and partially reactive in dilutions up to 1:5120.

With these data, a final diagnosis of ratbite fever (Haverhill) due to *Streptobacillus moniliformis* was made. When observed several times later, the child remained afebrile and asymptomatic.

CASE 2. A Negro boy seven and a half years old entered the hospital on April 6, 1959, with complaint of periodic fever and pain and swelling of both knees for the preceding three weeks.

On the day of onset, at first only the right knee was swollen, but within a very few hours both knees were involved and the pain was aggravated by weight bearing. The mother observed "nothing else unusual" except that "he felt feverish at times." Two weeks before entering the hospital he was examined at the pediatric and the orthopedic outpatient clinics. No history of trauma was elicited.

The patient was alert, well developed and well nourished and he did not appear ill. The temperature was 98.6° F., the pulse rate 90 and respirations 20 per minute. The skin was clear and there was no external evidence of trauma. There was definite evidence of diffuse swelling of the right knee, but there was no tenderness or increased local heat. Motion of the right knee was slightly restricted, and pain was evident with forced extension and weight-bearing. Roentgenograms of the right knee showed soft tissue swelling, but no involvement of the bony structures. It was stated in the radiologist's report that "the findings are certainly consistent with synovitis." Approximately 3 cc. of serosanguinous mucoid fluid aspirated from the knee was sent to the laboratory for bacteriologic studies, including animal inoculation for culture of tubercle bacilli. The patient was sent home with instructions to avoid weight-bearing and to return to the outpatient clinic in a week. On the day of the scheduled appointment he was found to have a temperature of 101° F. and a diffuse swelling of both knees which did not seem

to be inflammatory. The swelling was moderate in the right knee and minimal in the left. The patient did not appear ill, and no other abnormality was noted on physical examination. The patient was then admitted to the pediatric inpatient service for further studies.

The child had been born and reared in the Los Angeles area. The parents and siblings were said to be in good health. There was no known contact with tuberculosis.

The hemoglobin content was 12 gm. per 100 cc. of blood and the hematocrit was 38 per cent. Leukocytes numbered 3,000 per cu. mm.—48 per cent neutrophils (42 per cent segmented cells, 6 per cent banded), 1 per cent eosinophils, 45 per cent lymphocytes and 6 per cent monocytes. The corrected sedimentation rate was 12 mm. in one hour. The results of urinalysis were within normal limits. A culture of material from the throat grew no pathogenic organisms, and none grew on a culture of blood after ten days of incubation. Results of a test for sickle cells were negative. There were no lupus erythematosus cells demonstrated in the peripheral blood. Results of antistreptolysin titer and C reactive protein tests were reported as within normal limits. The fluid aspirated from the right knee a week before the patient entered the hospital showed no growth on culture in seven days of incubation. A stained specimen was negative for acid-fast bacilli. Tuberculin skin tests with the first and intermediate strengths showed no reactions. No abnormalities were noted in roentgenograms of both knees and the chest.

The patient remained afebrile and at no time appeared ill. By the third hospital day the swelling in both knees had subsided. The management of the patient consisted of bed rest and giving acetylsalicylic acid as needed for pain. On the fourth hospital day he was up and about and had no complaints. On the day before he was dismissed from the hospital, a specimen of serum was sent to the California State Laboratory in Berkeley for agglutination studies for ratbite fever due to *Streptobacillus moniliformis*. The patient was dismissed on the sixth hospital day without diagnosis. Seven days later the serum was reported "positive" for *Streptobacillus moniliformis* by the State Laboratory. Reports on that specimen and succeeding specimens were as follows:

Specimen drawn April 10, 1959, positive reaction at dilution of 1:80 and partially reactive at 1:320 dilution.

Specimen drawn April 24, 1959, positive reaction at dilution of 1:160 and partially reactive at 1:320 dilution.

Specimen drawn May 11, 1959, positive reaction at dilution of 1:80 and partially reactive at 1:320 dilution.

The patient remained asymptomatic, returned to school and resumed full physical activity.

*The studies were done at Walter Reed Hospital, Washington, D. C.

DISCUSSION

The cases presented here are unusual in that there was no history or clinical evidence of a bite by a rat or other animal. Furthermore, both patients recovered completely without chemotherapy. Inasmuch as there were few symptoms, the principal findings were serologic. An agglutination of 1:80 against the prepared phenolized antigen is considered significant.

In recent years treatment with penicillin has been found efficacious.

SUMMARY

Two cases of ratbite fever due to *Streptobacillus moniliformis* were proved by positive reaction to serologic tests. These are the first cases of this disease to be reported from Los Angeles County. Recovery was uneventful without specific therapy.

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Simultaneous Occurrence of Squamous and Adenocarcinoma of the Lung

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INSTANCES of multiple primary carcinomas can be found in most large tumor registries. To establish this diagnosis, the tumors must differ histologically, must arise in different locations and must be the source of metastatic lesions. In most reported cases of multiple primary carcinomas, only the first two criteria are met.^{9,11} The present report describes an example of a relatively infrequent coincidence of lesions—double primary bronchogenic carcinoma*—and demonstrates the difficulties of determining which of two coexistent lung lesions is malignant.

REPORT OF A CASE

A 77-year-old white man entered the hospital because of cough, shortness of breath, fatigue, lethargy, weakness, anorexia, loss of 30 pounds of weight and swelling at the ankles, all of three months' duration. He had no history of exposure to industrial irritants or to tuberculosis. He had smoked one package of cigarettes daily for 50 years.

On physical examination, the patient appeared acutely and chronically ill. The temperature was 98°F., the pulse rate 140 and respiration 36 per minute. The blood pressure was 100/70 mm. of mercury. There was no cyanosis of the skin or mucous membrane and no clubbing of the fingers or toes. In the sitting position, his neck veins were distended. The anterior-posterior diameter of the

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Submitted February 25, 1959.

*References 1, 3-8, 10.

chest was greater than normal. Respiratory movements on prolonged expiration were decreased. The lungs were dull to percussion over both apices. Hyperresonance to percussion was noted over the lower one-third of the chest anteriorly and posteriorly. Musical and subcrepitant rales were heard throughout both lungs. The cardiac impulse was not seen or felt, and the cardiac border could not be percussed. The cardiac rhythm was regular and rapid, and no murmurs were heard. The liver was tender to palpation, and the edge was felt 7 cm. below the right costal margin. No shifting dullness or fluid wave was elicited in the abdomen. Pitting edema in the lower extremities and extending to the sacral region was noted.

A roentgenogram of the chest (Figure 1) showed flattened leaves of the diaphragm bilaterally and increased radiolucency of both lung fields. An oval density in the left apex contained a radiolucent area, suggesting a cavity. An infiltrative process was present in the apex and first anterior interspace of the right lung.

Reaction to a tuberculin skin test was positive; to histoplasmin and coccidioidin skin tests, negative. Smears and cultures of the sputum were negative for tubercle bacilli. In cytologic study of the sputum, bizarre hypercornified, multinucleated hyperchromatic cells were observed. Bronchoscopic examination revealed no abnormalities. Specimens taken from the left and right bronchial trees were unsatisfactory for cytologic study. No pathologic changes were noted on biopsy of specimens from the right and left scalene lymph nodes.



Figure 1.—Posterior-anterior roentgenogram of chest showing lesions in the right and left upper lobes.

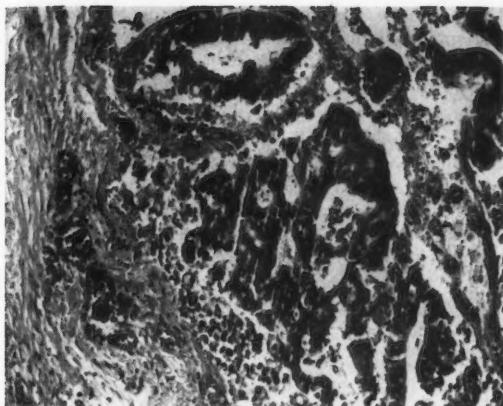


Figure 2.—Photomicrograph from apex of right lung showing adenocarcinoma with gland formation ($\times 250$).

The attending staff thought that the lesion in the right lung was a squamous cell carcinoma and that that in the left lung was caused by tuberculosis. Because of the patient's age and condition, thoracotomy was not advised, and he was treated with isoniazid and streptomycin. Monthly roentgenograms of the chest revealed no significant changes. Malignant cells of the same type as before were found on repeated cytologic examinations of the sputum. The patient was given 20 mg. of nitrogen mustard on three occasions without noticeable improvement. He did poorly, had several episodes of hemoptysis and died seven months after hospitalization.

PATHOLOGIC EXAMINATION

The pleural cavities were free of fluid and the lungs were expanded. The right lung weighed 625 gm. The right upper lobe contained an irregular firm region that extended from the hilum to the apex. On cut surface it appeared as a grey-brown mottled consolidated tissue. A firm grey thrombus occluded the artery in this region. The cut surfaces of the right middle and lower lobes were red and congested and oozed fluid. The bronchi in this region were reddened and contained grey mucoid secretions. The left lung weighed 575 gm. At the apex was a cavity into which projected polypoid tumor tissue arising from the bronchus supplying that portion of the lobe. Dark red areas of soft consistency were observed on cut surfaces of the upper and lower lobes. The remainder of the parenchyma was firmer, less red and not crepitant. The hilar and mediastinal lymph nodes were dark in color and contained small scarred areas that obscured the normal structure.

Microscopic examination of sections from the apices of each lung showed infiltration by tumor tissue surrounded by areas of fibrosis and necrosis. Tissue from the right lung (Figure 2) showed papillary and glandular patterns composed of cells with hyperchromatic, pleomorphic nuclei and dense

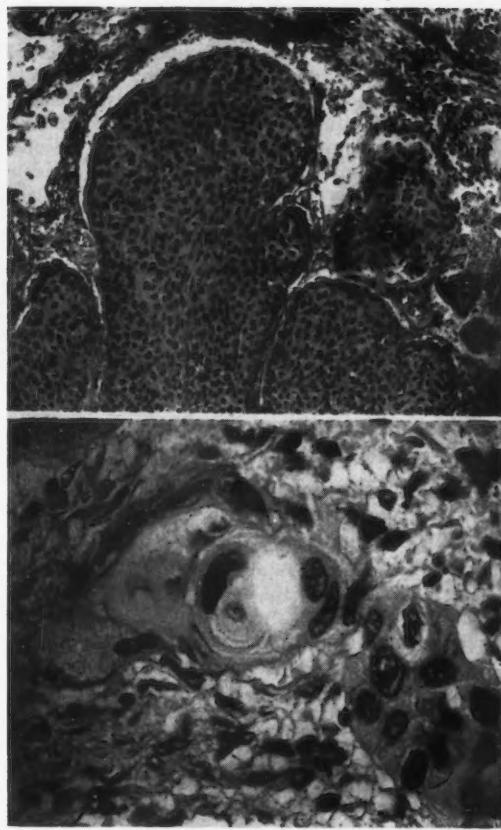


Figure 3.—Top: Photomicrograph from apex of left lung showing a squamous cell carcinoma ($\times 250$). Bottom: Photomicrograph from another portion of the tumor showing epithelial pearl formation and intercellular bridge formation ($\times 800$).

pink cytoplasm. There was mucus formation by the tumor. The tumor had involved the wall and obliterated the lumen of a large bronchus. Tissue from the left lung (Figure 3) showed malignant epithelium in sheets and strands differentiated toward the squamous cell type with some palisading at the margins and keratinization. Epithelial pearl formation and intercellular bridging were present in portions of the tumor. The nuclei were large and pleiomorphic and contained irregularly clumped chromatin. The tumor supplanted the mucosa of a fairly large bronchus. Sections from both lungs showed congestion with focal edema, atelectasis and emphysema. No other tumor sites in either lung, or extrapulmonary tumor metastasis or other primary tumors, were found.

The final diagnoses were: Bronchogenic carcinoma (adenocarcinoma upper lobe of right lung, squamous cell carcinoma upper lobe of left lung); pulmonary edema and congestion; pulmonary emphysema; and thrombosis of medium-sized artery in upper lobe of right lung.

DISCUSSION

The incidence of multiple simultaneous unilateral or bilateral lung carcinoma is not known. Relatively few such instances have been reported, and some of these are doubtful because of the difficulties in distinguishing primary from metastatic lesions. Cahan and co-workers,² in a study of 1,493 patients with bronchogenic carcinoma, found 25 coexistent primary carcinomas, but no instance of double primary lung tumors. Warren and Gates¹¹ in a study of reports of multiple malignant lesions noted that the reported incidence varied from 1.84 to 3.9 per cent. Of the 1,259 cases of multiple malignant lesions cited, none were cases of double primary bronchogenic tumors. Slaughter⁹ noted only three instances of multiple lung tumors in 1,868 reported cases of multiple malignant lesions. In 234 cases of bronchogenic carcinoma, Olcott⁶ found only one instance in which presumptive evidence indicated a double primary lung carcinoma. Robinson and Jackson⁷ reported double bronchogenic carcinomas in 9 of 500 patients with bronchogenic carcinoma, the largest number reported by one group of investigators. The authors stated the number of cases in the series was too few in number to be statistically significant. McGrath and co-authors⁵ found five instances of grossly visible double tumors in the same or different lobes in 87 cases of bronchogenic carcinoma. Other reports have described double primary bronchogenic carcinomas in the same or opposite lungs.^{1,3,4,8,10}

The premortem diagnosis of bronchogenic carcinoma in the present case was made on the basis of cytologic studies of the sputum. The roentgenographic evidence of a lesion in the apex of each lung raised the possibilities that one was malignant and the other not, that one was metastatic from the other, that both were themselves metastatic from an extrapulmonary site or that one was a primary and the other metastatic from an extrapulmonary site. Despite bronchoscopic examination with attempts to obtain secretions independently from each lung, despite biopsy of the scalene lymph nodes and use of antituberculous therapy and nitrogen mustard, the location of the tumor was not known before death. At necropsy, two circumscribed and well differentiated tumors were found: An adenocarcinoma in the right lung and a squamous cell carcinoma in the left. No nearby or distant metastatic lesions from either tumor or another primary tumor were found. These findings meet two of the three criteria for the diagnosis of multiple primary tumors; while it cannot be proved, the supposition that the tumors were independent appears supportable.

The dilemma raised by lesions in both lungs in cases in which diagnosis of bronchogenic carcinoma is established is difficult to resolve. If one lesion is metastatic from the other, thoracotomy is not warranted. If only one lesion is malignant, the wrong side may be explored. Although few patients with bronchogenic carcinoma survive five years, even this

small chance for survival must not be denied a patient considered to have (but who actually does not have) a metastatic lesion.

The microscopic appearance of bronchogenic carcinomas is not uniform.^{5,6} Different cell types are often found within the primary lesion, and the cell type in the primary may differ from that in metastatic sites. This lack of uniformity may result from the coalescence of tumor from many sites.⁵ Nevertheless, a relatively well-differentiated squamous cell carcinoma would not be expected to give rise to a well-differentiated adenocarcinoma, or vice versa. It is probable that the two tumors in the present case were independent and were coincident by chance.

SUMMARY

A case in which an adenocarcinoma in one lung was found to coexist with a squamous cell carcinoma in the other lung is reported—apparently a case of double primary unrelated pulmonary malignant lesions. The report demonstrates the difficulties in determining which lung is involved when both show lesions and where the diagnosis but not the site of the bronchogenic carcinoma has been established.

6092 North Arlington Boulevard, San Pablo (Mandel).

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California MEDICINE

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EDITORIAL

Whither Government?

IN October of this year the California Medical Association held its annual Conference of County Society Officers. This meeting is a means of bringing the leaders of medicine in the county societies up to date with events of the moment. It is timed to disseminate information in advance of the annual convention, so that the county society representatives may have current information on which to base any actions or proposals emanating from their own confines.

That such conferences are valuable to the county representatives was proved by the many complimentary remarks and expressions of thanks voiced by those in attendance. The audience this year included the president, president-elect and secretary of each county society, plus two or more chairmen of important committees within the county societies. The presence of a number of county representatives given opportunity to discuss the program items, assures a maximum of reporting on these topics at the home base of the participants.

Much emphasis at the conference was placed on the changing patterns of medical practice under an ever-growing participation of government in the medical care of its citizens. It was obvious to all present that government has been infiltrating the field of medical practice and assuming a constantly enlarging responsibility for the care of people at tax-paid expense.

With each new incursion into medical practice, government establishes new rules, new controls. Each in itself may be understandable and not unduly onerous but when a multitude of such controls finally faces the individual physician, the gravity of the situation becomes obvious.

Although physicians have been opposing an outright system of tax-paid government-controlled medical practice for a number of years—and opposing it successfully—the government's gnawing at the edges has not been stopped to any noticeable degree. The sole remaining question seems to be—how far will it go?

California's own example shows that the state undertook to control a portion of medical practice in 1912, when the original Industrial Accident laws were written. While these laws did not actually set the State of California up in the practice of medicine, they did prescribe the conditions under which medical services would be rendered by physicians, the manner of reporting required in such cases and, more important, the fees that would be paid for professional services.

The medical profession turned its collective back on the Industrial Accident laws when they were first passed. Physicians felt that this was a dominated type of practice which was repugnant to them and under which they did not care to devote their time or talents. Yet, enough physicians did agree to handle these industrial injuries that the laws became effective. Today, less than five decades later, practically all eligible physicians in the state handle these cases and collect as full payment a schedule of fees which is patently below the fees for comparable services for private patients.

In this instance, at least, time seems to have dulled the keen edge of opposition which militant medical men displayed at this early threat to private medical practice.

More recently the profession has been confronted with a number of additional medical care plans under which government acts as a foster father for groups of citizens.

Crippled Children's Services, Unemployment Compensation Disability, Aid to the Needy Aged, Aid to Needy Children, Medicare, Aid to Needy Blind—all these have come into today's picture. Tomorrow—the Forand Bill?

Each program brings its new regulations. Each sets its own standards of performance and its own fees. Each specifies the training of physicians eligible for participation.

Each program, it must be admitted, has attracted an adequate number of physicians to make the plan work. While there is much grumbling from the profession as a whole over the many programs, physi-

cians individually appear to accept each plan and to supply the services outlined in the legislation.

Today the weight of these accumulated plans is being felt. The camel's back is beginning to sag.

In addition, today we are witnessing an attempt, in state government at least, to standardize all professional fees to be paid by the state in programs administered by it. The simplest form of standardization, of course, is to take the lowest common denominator and apply it to the entire scale of fees and services. This is sound economics for state government but an added imposition upon the physicians whose training and skill make these programs possible and workable.

Medical leaders, those given the responsibility for trying to guide these many programs, today are faced with a single governmental force which literally demands collective bargaining. On the other hand, the medical profession as a whole is made up of individuals who are unwilling to have their bargaining done by others, even those of their own choosing. The solution to this dilemma has not yet been presented; until it is, and is accepted by the profession, there are bound to be outcries from many against the injustice or the weight of all government medical care programs.

Government, under the social philosophies which have obtained for the past quarter century, seems to be bent on providing more and more services for more and more citizens. Medical care, often deemed as essential as food, clothing and shelter, is among the things that some elements in government would have the state provide. And of late organized medicine has had considerable difficulty in combatting the emotional appeal of such proposals, for hard facts seem to get short shrift in the political sophistries of today.

One can hope for some reversal of this trend. One can dream wistfully that before long some of these plans may fall of their own weight. Such hopes, such dreams, are contrary to the history of government and of bureaucracy, a history replete with examples of government plans growing ever larger.

Despite a discouraging outlook, medicine's role today must remain as it has been in the past, namely, resistance to plans which are medically, economically or socially unsound. Win or lose, principles must be upheld and a battle waged when unsound proposals are put forth. Obviously, the medical profession will continue in this spirit. Meanwhile, it seems fair to ask—whither government?

Letters to the Editor...

Vendors of Doctor-Care

DOCTOR-CARE is the application of technical knowledge and skill to the needs of an individual by another individual who has met the standards of education specified by the state. Hospitals, medical centers, and closed panel groups operating under a trade name cannot "practice medicine." They are vendors of doctors' services.

Our state laws regulate the practice of medicine but they do not regulate the vending of doctor-care. The day has come when we must emphasize the distinction between doctor-care and medical care. All of the paramedical activities are embraced under the latter term. The confusion of thought can have serious consequences, such as furthering the aims of those who seek to make the doctor merely the technical head of a team which will be managed and exploited under lay controls.

The medical profession has a code which is intended to protect both the public and the profession against conditions prejudicial to the good and welfare of both the public and the profession. One intent of that code is to prohibit unbridled advertising as a means of promotion, such as prevails in some commercial enterprises.

The medical societies have ordained that groups of doctors are under the same ethical conduct pro-

visions as are specified for the individual. Some of our institutions have made the line between commercial and professional conduct vague, if not entirely invisible.

The doctors who permit their licensed privileges to be sold through third parties or promoted by a trade-name partnership and who profit through the vendors' promotions are violating the spirit if not the letter of the code. When will the medical profession discipline this commercialization for profit to the disadvantage of individual doctors who abide by the code faithfully?

The small closed panels justify government management and impersonalization of sick care, the necessary step to a system of state medicine. There is real danger ahead because the hospitals and Blue Cross are financially in trouble. Hospital insurance rates must go up if the hospital "per diem" cannot come down. The government has taken over the hospitals in Canada. When will they take the doctors, as has been done in England?

It can happen here—if the doctors are not alert and united in support of a free medical profession. It will be fatal to the future of our profession if doctors permit it to be thrown into a political soup kettle.

Reprinted from *New York State Journal of Medicine*, 59:2626, July 1, 1959.

California MEDICAL ASSOCIATION

Six-Year Cancer Study to Be Conducted

THE Cancer Commission of the California Medical Association has reviewed the recently announced six-year cancer study to be undertaken by the American Cancer Society, and gives its endorsement. Because physicians may be asked questions by their patients who will be involved, the Commission is outlining here the purpose and scope of the survey. The American Cancer Society's national Board of Directors, at its June 1959 meeting, approved an epidemiological research study of 500,000 families, which will include one million people, to be carried on by selected state divisions of the Society. The purpose of the study is to test many theories about the cause of cancer, with particular emphasis on environmental factors which may lead to the disease. The following are a few of the important questions on which it is hoped that valid data can be secured: Relationship of occupational hazards to cancer, family tendencies toward cancer, relationship between cancer and other diseases, relationship between breast feeding and breast cancer, relationship of air pollution to cancer, relationship between diet and cancer, the effect of quitting smoking and of the use of filters in relation to the development of lung cancer.

The study is to be conducted by volunteer researchers, each of whom will interview approximately seven families in which there is at least one member 45 years or older. Other adults over 30 years of age in each of these families will be asked to fill out a questionnaire. There will be an annual follow-up for a period of six years, and in every second year a supplementary questionnaire will be required. As in the case of the smoking study, vital statistics records will be checked annually to determine the cause of death of individuals who die during the study.

The California Division is among the 20 divisions which are being asked to participate. Because of its size, California's participation is crucial to the study. The suggested quota for California is 65,000 families, or approximately 150,000 adult individuals.

It is anticipated that the survey will have gotten

under way in most California communities by the end of this year.

The questionnaire being used for this survey is very extensive and covers a wide range of activities relating to the individual's living habits including diet, exercise and smoking. Some of the questions are quite personal but extreme caution will be exercised in maintaining the replies in complete confidence at the local, state and national levels.

The volunteers conducting this survey will be specially trained. However, they will not actually complete the questionnaire. The individual contacted by the volunteer will, himself, complete the questionnaire and place it in a sealed envelope which will not be opened until it reaches the statistical section of the American Cancer Society in New York City.

Each county medical society will be supplied a copy of the questionnaire and other pertinent information. Each local branch of the American Cancer Society likewise has detailed information regarding the survey. Each physician is urged to contact either of the above or the Cancer Commission of the California Medical Association (693 Sutter Street, San Francisco 2) if more information is desired.

REFERENCES

J.A.M.A., 70:1326-27, July 11, 1959; Plan large scale cancer study.
A.M.A. News, July 13, 1959, p. 14.
Cancer News (A.C.S.), 13:7-10, Fall 1959, A.C.S. launches "Cancer Prevention Study."

| | |
|--|---|
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In Memoriam

COUEY, ELMER J. Died in Santa Ana, October 25, 1959, aged 82. Graduate of College of Physicians and Surgeons of San Francisco, 1900. Licensed in California in 1900. Doctor Couey was a member of the Fresno County Medical Society, a life member of the California Medical Association and a member of the American Medical Association.

+

DANSKY, ABRAM EUGENE. Died in Berkeley, November 1, 1959, aged 39, of myocardial infarction. Graduate of University of Nebraska College of Medicine, Omaha, 1945. Licensed in California in 1950. Doctor Dansky was a member of the Alameda-Contra Costa County Medical Association.

+

HALEY, PHILIP STEPHEN. Died in San Jose, October 11, 1959, aged 59, of injuries from an auto collision. Graduate of St. Louis University School of Medicine, Missouri, 1929. Licensed in California in 1929. Doctor Haley was a member of the Santa Clara County Medical Society.

+

JACKEMY, EDWARD JOSEPH. Died in Los Gatos, October 13, 1959, aged 53. Graduate of University California School of Medicine, Berkeley-San Francisco, 1932. Licensed in California in 1933. Doctor Jackemy was a member of the Santa Clara County Medical Society.

JACOBS, BENJAMIN C. Died July 18, 1959, aged 62. Graduate of Cornell University Medical College, New York, N. Y., 1923. Licensed in California in 1942. Doctor Jacobs was a member of the Los Angeles County Medical Association.

+

PALMER, EDWIN O. Died in Hollywood, October 19, 1959, aged 87. Graduate of Columbia University College of Physicians and Surgeons, New York, N. Y., 1896. Licensed in California in 1900. Doctor Palmer was a member of the Los Angeles County Medical Association.

+

SHUMATE, JAMES WILLIAM. Died in Santa Cruz, October 11, 1959, aged 56. Graduate of University of Arkansas School of Medicine, Little Rock, 1929. Licensed in California in 1937. Doctor Shumate was a member of the Santa Cruz County Medical Society.

+

WATSON, TOLBERT. Died July 30, 1959, aged 79. Graduate of University of Minnesota Medical School, Minneapolis, 1908. Licensed in California in 1925. Doctor Watson was a retired member of the Santa Clara County Medical Society and the California Medical Association and an associate member of the American Medical Association.

Program

FOR

C.M.A. Annual Session

February 21*-24

LOS ANGELES

Follows page 384 of this edition

*

*FIRST MEETING OF HOUSE OF DELEGATES WILL BE HELD
SATURDAY, FEBRUARY 20, BEGINNING AT 7:30 P.M.

APPLICATION FOR HOUSING ACCOMMODATIONS

FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the California Medical Association, February 21*-24, 1960, Los Angeles, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.

Eighty-ninth Annual Session CALIFORNIA MEDICAL ASSOCIATION Los Angeles, California FEBRUARY 21-24, 1960

HOTEL ROOM RATES[†]

| AMBASSADOR HOTEL | Single | Twin Beds | Suites |
|---|-------------|-------------|-------------|
| 3400 Wilshire Boulevard | | | |
| Main Building..... | 12.00-22.00 | 16.00-26.00 | 32.00-44.00 |
| Garden Studios..... | 18.00-28.00 | 22.00-32.00 | 44.00-58.00 |
| CHAPMAN PARK HOTEL | | | |
| 3405 Wilshire Boulevard..... | 9.00-10.00 | 14.00 | 20.00 |
| Bungalows..... | | 16.00 | 25.00-40.00 |
| THE GAYLORD HOTEL | | | |
| 3355 Wilshire Boulevard..... | | 12.50 | 18.00 |
| HOTEL CHANCELLOR | | | |
| 3191 West Seventh Street..... | 9.00 | 12.00 | |
| SHERATON-WEST (formerly Sheraton-Town House) | | | |
| 2961 Wilshire Boulevard..... | 12.50-18.00 | 17.50-23.00 | 34.00 |

ALL RESERVATIONS MUST BE RECEIVED BEFORE: JANUARY 15, 1960

*February 20: House of Delegates will start with evening meeting Saturday, February 20.

†The above quoted rates are existing rates but are subject to any change which may be made in the future.

CALIFORNIA MEDICAL ASSOCIATION
693 Sutter Street
San Francisco 2, California

Please reserve the following accommodations for the 89th Annual Session of the California Medical Association, in Los Angeles February 21-24, 1960. (House of Delegates members: First meeting of House begins Saturday evening, February 20.)

Single Room \$..... Twin-Bedded Room \$.....
Small Suite \$..... Large Suite \$..... Other Type of Room \$.....
First Choice Hotel..... Second Choice Hotel.....

ARRIVING AT HOTEL (date):..... Hour:..... A.M. P.M. { Hotel reservations will be held until
Leaving (date):..... Hour:..... A.M. P.M. { 6:00 P.M., unless otherwise notified

THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

.....
.....
.....

Individual Requesting Reservations—Please print or type
Name..... Officer?..... Delegate?..... Alternate?.....
Address..... County.....
City and State.....

California Medical Association

1960

Annual Session

AMBASSADOR HOTEL • LOS ANGELES

FEBRUARY 21 to 24

- ★ General Scientific Meetings • Postgraduate Courses
Technical Exhibits • Scientific Exhibits
- ★ Medical Motion Pictures
- ★ Presidents' Dinner Dance
Sunday, February 21 • Cocoanut Grove
- ★ House of Delegates
Sunday, February 21 • Wednesday, February 24
Opening Session, Saturday, 7:30 p.m., February 20
- ★ Registration Daily
8:30 a.m. to 5:30 p.m. . . . No Registration Fee

PLEASE MAKE HOTEL ROOM RESERVATIONS ONLY THROUGH C.M.A. OFFICE IN SAN FRANCISCO. USE RESERVATION REQUEST FORM ON PAGE 365.

3 POSTGRADUATE COURSES

During

C.M.A. ANNUAL SESSION

February 21 to 23, 1960 • Los Angeles

THE CALIFORNIA MEDICAL ASSOCIATION in cooperation with the Medical Schools of UNIVERSITY OF CALIFORNIA, LOS ANGELES, UNIVERSITY OF SOUTHERN CALIFORNIA and COLLEGE OF MEDICAL EVANGELISTS, will present three Postgraduate Courses during the Annual Session in February. These courses will be clinically oriented and will include case presentations and closed circuit television.

Choose the course which most interests you, follow the course, and the 1960 session will send you back to your practice stimulated and refreshed.

Look for the program giving complete details which will arrive in your office in January.

• By UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE, LOS ANGELES:

INFECTIOUS DISEASES—9 hours

Time: Sunday, Monday and Tuesday, February 21, 22 and 23, 1960—9:00 a.m. to 12:00 noon.

Place: February 21 at Chapman Park Hotel, February 22 and 23 at Ambassador Hotel, Los Angeles.

• By UNIVERSITY OF SOUTHERN CALIFORNIA:

CLINICAL ENDOCRINOLOGY—9 hours

Time: Sunday, Monday and Tuesday, February 21, 22 and 23, 1960—9:00 a.m. to 12:00 noon.

Place: February 21 at Los Angeles County Hospital, February 22 and 23 at Ambassador Hotel, Los Angeles.

• By COLLEGE OF MEDICAL EVANGELISTS:

MINOR SURGERY IN THE OFFICE—9 hours

Time: Sunday, Monday and Tuesday, February 21, 22 and 23, 1960—9:00 a.m. to 12:00 noon.

Place: White Memorial Hospital, Los Angeles.

Tuition Fee: \$25.00 for each course

----- APPLICATION FOR ENROLLMENT -----

Mail to: POSTGRADUATE ACTIVITIES, CALIFORNIA MEDICAL ASSOCIATION
2975 Wilshire Boulevard, Los Angeles 5, California

With check or money order in the amount of \$25.00 made payable to CALIFORNIA MEDICAL ASSOCIATION

Name _____

Address _____

I am in General Practice _____ I limit my practice to _____

Medical School Attended _____ Year of Graduation _____

Please enroll me in the course indicated by ✓.

- 1. Minor Surgery in the Office (9-hour course, Sunday, Monday and Tuesday mornings)
- 2. Infectious Diseases (9-hour course, Sunday, Monday and Tuesday mornings)
- 3. Clinical Endocrinology (9-hour course, Sunday, Monday and Tuesday mornings)

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, M.D., M.P.H.
Director, State Department of Public Health

THE INFLUENZA surveillance program for the 1959-60 season was activated November 1. It is similar to the one carried out last year and is designed to provide the department with rapid information on the fluctuation in the incidence of influenza as it occurs.

Several indicators are being used to detect any upswing, such as school absenteeism, numbers of deaths from pneumonia and influenza, and laboratory reports.

Eight local health departments are participating in the network and will report an unusual accumulation of respiratory disease within their jurisdiction.

No widespread attacks are anticipated, although localized outbreaks undoubtedly will occur. The predominant type of influenza this fall and winter is expected to be A-2, or Asian strain.

Commercially available polyvalent influenza vaccine contains immunizing materials against the important strains, including the Asian. Its use is recommended by the department for persons for whom onset of influenza might represent an added health risk, such as persons with cardiovascular or pulmonary conditions, persons over age 55 with chronic illness of any type, and pregnant women.

The number of paralytic poliomyelitis cases in California is within 30 of doubling the number reported last year, with young adults and youngsters bearing the brunt of the attack.

For this year 12 deaths due to poliomyelitis have been recorded. Only one of the 12 who died had had three doses of Salk vaccine, and even in that person they apparently were poorly spaced, probably a year having elapsed between doses.

The vaccine supply situation has eased considerably as compared to the summer months, and there seems to be no shortage of vaccine for either commercial or public agency use.

While only one case of western equine encephalitis has been reported so far this year, there have been 34 laboratory proved cases of St. Louis encephalitis, with one death. This is the highest incidence of this disease since 1954.

The majority of the cases occurred in the northern part of the Central Valley, with a few scattered cases

reported from the San Joaquin and Imperial valleys. This corresponds well to the known endemic area and no case has been proved to have originated outside the endemic area.

Preliminary steps have been completed for a pilot study of the health status of Indians and their utilization of medical facilities in the ten counties which contract with this department for services.

The Los Angeles County Health Department has been reporting an unnamed illness in school children during the past several weeks. This illness has a sudden onset characterized by frontal headache and nausea. A small proportion of those affected reported abdominal pain with cramps, vomiting and/or diarrhea. A few had low grade fever. None reported dizziness or rashes. The duration of symptoms varied from three days to a week, and there was a tendency to relapse.

Reports have been received mainly from junior and senior high schools, but cases have also been seen in the elementary schools. In one area the teachers were similarly affected.

The illness is reported to spread rapidly when once introduced into a classroom, and attack rates for total school populations vary from approximately 10 to 30 per cent; in single classrooms up to 50 per cent.

Laboratory studies on blood and stool specimens are being conducted by the department's Viral and Rickettsial Disease Laboratory. So far the disease seems to be limited to Los Angeles County.

The importance of occupational health services is reflected in the number of local health departments in California which now are conducting, or starting, such programs. Thirty-seven full-time and two part-time local health departments report they provide occupational health services or are drafting definite plans to do so. These jurisdictions cover 90 per cent of the state's population and about 90 per cent of the labor force. Ten years ago occupational health programs existed in only Los Angeles City and County.

The department's Bureau of Crippled Children Services is now providing medical care to children

with orthopedic handicaps resulting from poliomyelitis. Children with poliomyelitis whose condition is in the acute stage, however, are not eligible for care through the program.

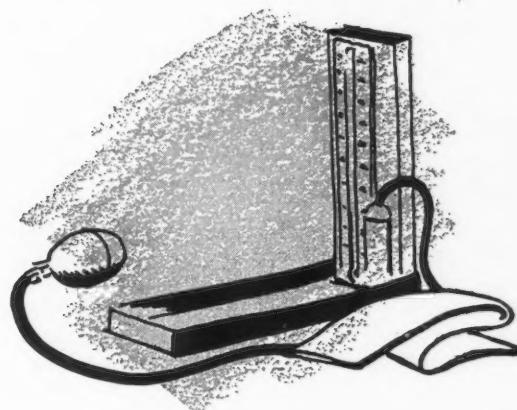
Because Crippled Children Services is tightly budgeted this year, care can be given only in cases of severe hardship. Next year, and in future years, the bureau will budget for the care of children with orthopedic handicaps resulting from poliomyelitis, as it does for similar handicaps suffered from other causes.

The Berkeley City Health Department has reported a food poisoning outbreak due to *Clostridium perfringens*, the first time this organism has been

known to be associated with food poisoning in California.

The epidemic occurred in Berkeley where 40 people attended a reunion dinner in a private home. Guests came from eight counties. Of the 40 persons present, 32 have been interviewed and 21 reported being ill. Symptoms were mild, usually stomach cramps and diarrhea—no vomiting or fever.

The food served was purchased from a commercial caterer, taken to the home and eaten without refrigeration or adequate reheating. Samples of the food were examined in the Division of Laboratories and the organism was isolated from roast beef. All of those who became ill had eaten the meat.





WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION

The following remarks are excerpts from an address by T. Eric Reynolds, M.D., President of the California Medical Association, at a meeting of the Woman's Auxiliary to the California Medical Association, Santa Barbara, September, 1959

I HAVE BEEN ASKED to comment on the hearings held on the Forand Bill, which I had the opportunity to attend. These hearings were rather impressive although it was probably a rehash of the material that had been presented at the hearings a year before. One had the impression from listening to the witnesses from both sides and judging from the questions asked by the various members of Congress, that there were three general points of view on the parts of the Congressmen: Those who were very much in favor of the program, those who were very definitely opposed, and the majority who either chose not to let it be known how they felt or were truly dubious about it. Furthermore, one felt that many of this group would welcome legitimate reasons for not having to commit the government to this expensive and experimental program. The only way that they could feel justified in this course of action would be to be able to see substantial progress made toward the solution of the problem. I think this should be the keynote of what we need to do.

We were buying a short amount of time in which to prepare for further, and perhaps more pressing, encounters.

I think that nearly everyone would agree that there is a problem with respect to the care of the aged people in our population and that it has a political as well as a socio-economic and medical aspect. How to solve it is another matter.

We are in the midst of a very significant population explosion. It is estimated that the world population will increase from 2.8 billion to 3.5 billion by the turn of the century. That means a net gain of about 5,000 people per hour. The population of California has increased 15-fold since the turn of the last century and life expectancy in general has increased from about 47 years to about 70 years for a composite of both sexes and the percentage of those people over the age of 65 has nearly doubled since 1900 and the curve is still tending upward. If the keys to arterial degeneration and malignancy are found, the curve will rise much more steeply.

In the problem of an aging population we think that the medical need, especially where it requires

complicated surgical operation with hospitalization, is the least "unmet" of any of its aspects. The biggest part of the problem is entirely outside of the scope of activities contemplated by Forand-type legislation. Yet, if this contemplated legislation passes it would cost perhaps a billion and a half or two billion dollars annually. One would not balk at the cost if this were actually what is needed to correct this situation. Perhaps at this point it would be best if I quoted from some remarks that I made before the Western Branch of the American Public Health Association at their meeting in San Francisco of June 1, 1959.

"When we use the term *aged*, by definition we mean those 65 or older. Actually, no such arbitrary dividing line is sensible from a clinical point of view; for, as we all know, chronological and physiological age differ widely in different people. However, for statistical and actuarial purposes, we have to accept some birthday as an end point (or should I say beginning point?), so it may as well be the 65th birthday.

"Management of geriatric disease is often made more difficult because so many oldsters do not have a clear understanding of their medical problems for various reasons such as education, insight, forgetfulness, childishness and general lack of a realistic approach to the symptoms of disease. Many simply do not accept their age and its implications. So one finds them 'shopping around'—often to quacks and soothsayers—with symptoms that have been explained by their physicians as irremediable, except for palliation. This may account for the fact that far too many physicians are unhappy with older patients and seem to protest the various insurance systems which may lead them to doctors' offices. This is indeed unfortunate but I fear it is true.

"This age group has a high incidence of morbidity at a time when economic resources, or at least money income, are the lowest. As time goes on, more and more older people should come under arrangements for paid-up insurance—extended benefits and such devices; but in the meantime, some form of subsidy may have to fill part of the gap.

It is to be hoped that this can be done without the need for a colossal self-perpetuating bureau to be formed where administrative red-tape tends to become the tail that wags the dog. Perhaps the quality of medical care is high in some of our veterans' facilities, and 'old soldiers' homes,' etc., but time and efficiency certainly mean nothing. Neither, it seems, does expense to the taxpayer.

"The employment and extension of visiting nursing services, better nursing homes, convalescent hospitals, home-makers services, 'meals-on-wheels' and such things, need to be fostered. Rehabilitation, as far as it can apply to the older age group, is highly desirable.

"One thing is certain: Almost every case has to be individualized and the patient dealt with according to circumstances of (1) family situation, (2) economic status, (3) temperament, (4) vigor, and (5) mentality. Certainly just putting people under custodial care with many others, often worse off, tends to undermine the mental and emotional stamina of many oldsters to the point that they become hopelessly passive and dependent. Whereas such a simple expedient sometimes as an arm to lean on while an older person takes a short walk, perhaps a visit to a friend or relative, or a visit to a day-home or an occupational center, might keep this same individual active and alert.

"Changes in our family living have reduced both the ability and the willingness of children to provide for older relatives. Smaller houses, the migration to the suburbs, the tax structure, inflation and installment buying of mass produced goods have conspired to make this virtually impossible. The younger relatives themselves are mostly living on next week's paycheck. Here is a real opportunity for the physician to practice preventive medicine by preparing his younger and middle-aged patients of today for tomorrow's older age. A serious talk to younger patients about the development of habits of mind as well as hobbies and games may be even more important than a perfunctory glance through

a fluoroscopic screen, on a periodic examination. Preparation, while still young, for the stresses and strains of leisure, is possibly the greatest need.

"There is a lot more to all this than the passing of a law, the creating of a bureau and the spending of public money. As was said before, the medical problems of the aged are manifold and a large part of this is a family and cultural responsibility. Physicians, I believe, have a social responsibility here because in a large sense, medicine created the problem, largely reducing infant mortality and making it possible for so many to live into this later period of life. When the keys to malignancy and vascular degeneration have been found, there will probably be much more of this problem. But is it enough merely to stay alive and not to 'live'? Most of us, if we could have our choice, would not think so. Here I think are some of the most urgent needs in the medical care of the aging population. By thought, study and effort, many of them can be resolved."

Now, how about the Auxiliary? Your help in much of this can be invaluable because it seems to me that the women of the Auxiliary can act as a focal point for rallying community action in such matters as having information centers and sparking visiting nurse services, homemaker services, chronic disease centers, rehabilitation activities, recreational and vocational activities and many others that can be integrated with the general social responsibilities of a democratic society. This, of course, needs to be done without attempting to usurp the activities of other groups or without intruding or stepping on sensitive toes, but I feel quite certain that with the finesse you women have demonstrated in the past, you will find that you will be very welcome in the circles which can implement some of these needed programs and facilities.

MRS. THEODORE A. POSKA
President, *Woman's Auxiliary to the California Medical Association*



NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Announcement of the opening of the first East Bay diagnostic center for children with neurologic disorders, at Children's Hospital of the East Bay, was made by the hospital recently. The center will be operated on an outpatient basis.

The coordinator of the new service, a pediatrician who is also a neurologist, will make an initial evaluation and then refer the patient to a diagnostic team of specialists in various fields.

Regularly scheduled meetings of the diagnostic team will be integrated with a teaching program in children's neurology. Resident physicians now training at Children's Hospital of the East Bay will attend conferences and assist in the diagnostic workups. Private physicians may refer patients to the neurological team, the announcement said, and such patients will remain under the control of the private physician if he wishes.

The neurologic diagnostic team has been approved by the Crippled Children Services of the State of California Department of Public Health. Crippled Children Services will pay for the services of the diagnostic team in cases where eligibility requirements are met.

LOS ANGELES

In recognition of need for advancement of programs in cardiac rehabilitation, the Los Angeles County Heart Association recently allotted \$2,500 in support of the Homemaker Service of Los Angeles Region.

Dr. Walter S. Thompson, Jr., Pasadena, president of the Association, presented a check to Mrs. Richard H. Davis of Park LaBrea, president of the Homemaker Service agency.

The Homemaker Service aids children, convalescents, the elderly and ill by providing a temporary homemaker in time of family crisis.

Since some families cannot pay full cost of the home-help service, the agency must depend for cooperative funds upon the community and the California State Department of Social Welfare. The Los Angeles County Heart Association is one of 21 supporting health and welfare agencies.

* * *

Approval by the Public Health Service of a \$500,000 grant for a new research center at Cedars of Lebanon Hospital, Los Angeles, has been announced by Dr. Leo G. Rigler, the hospital's executive director.

The grant, recommended to the USPHS by the National Advisory Council on Health Research Facilities, will be matched by funds raised by Cedars in a community-wide drive. It is estimated that construction and equipment of the new facilities will cost in excess of \$1,000,000.

Cedars' present research program, conducted through its Institute for Medical Research, encompasses more than 100 investigative studies annually.

* * *

The American Institute of Ultrasonics in Medicine has announced that the new president is Dr. David Rubin, of Los Angeles. Dr. Rubin, Dr. John Aldes of Los Angeles and Dr. William Bierman of San Francisco are members of the executive board.

SAN BENITO

An exhibit on cancer quackery, sponsored jointly by the Cancer Commission of the California Medical Association, the California State Department of Public Health and the California Division of the American Cancer Society was awarded the blue ribbon for educational exhibits at the San Benito County Fair, held in October.

The exhibit includes a display of specious "cancer cures" and cancer diagnostic devices that have been confiscated in court actions against quacks.

SAN FRANCISCO

The Board of Chancellors of the American College of Radiology has voted to bestow the organization's gold medal upon Dr. L. Henry Garland of San Francisco for "distinguished and extraordinary service to the American College of Radiology and the profession for which it stands." Presentation of the medal will take place February 5 at a meeting of the College in New Orleans.

GENERAL

Dr. Malcolm H. Merrill, director of public health, California State Department of Public Health since 1954, has been reappointed to the post for a four-year term beginning January 1, 1960, by Governor Edmund G. Brown.

Dr. Merrill was moved up from assistant director by Governor Goodwin Knight when Dr. Wilton Halverson resigned and became associate dean of the School of Public Health at UCLA. In 1956 he was appointed to a four-year term which is now nearing its end.

Dr. Merrill was installed as president of the American Public Health Association during its 87th annual meeting, October 19 to 23, in Atlantic City. Dr. Charles E. Smith, dean of the School of Public Health of the University of California, Berkeley, was elected to a three-year term on the executive board.

* * *

Medical students, residents and interns have been invited to prepare scientific exhibits to be displayed at the tenth annual convention of the Student American Medical Association in Los Angeles, May 4 to 8, 1960.

The three exhibits judged most outstanding in both the student and resident-intern categories will win SAMA-Lakeside Awards. The top winners in each category will be further honored by having their exhibits featured at the Scientific Exhibit Assembly of the American Medical Association during the annual A.M.A. convention in Miami Beach, Florida, in June 1960.

In addition to a prize of \$500, the top winners will receive an expense-free trip to the A.M.A. convention. Second and third prize winners will receive \$250 and \$100, respectively.

Applications for the 1960 SAMA-Lakeside Awards should be sent to the executive director, SAMA, 430 North Michigan Ave., Chicago, Illinois. Deadline for applications is January 1, 1960. Notification of accepted exhibits will be made February 1, 1960. Applications should contain the title of the exhibit, a brief description of its physical dimensions and a 250-300 word report explaining its purpose. Applicants are advised to first check their subject matter with a faculty member or chief.

* * *

The National Foundation has announced the availability of fellowships for clinical study in arthritis and related diseases for physicians who have an interest in rheumatic diseases and who intend to apply their knowledge of these diseases to clinical service, teaching, or research. Only physi-

cians licensed or eligible for licensure to practice in the United States and who have had at least two years of specialty training acceptable to the appropriate American Board (or equivalent training) are eligible. All applicants must be citizens of the United States.

The candidates should propose a program of full time study in a hospital—preferably university-affiliated—which offers a well developed program in arthritis and related diseases. The major portion of his time should be spent in clinical service, but a small amount may be devoted to research and teaching. Fellowships are awarded for a minimum of one year but may be renewed upon approval by the National Foundation's Clinical Fellowship Committee. Financial support for the Fellow is \$4,500 a year with \$540 allowed annually for each dependent. Annual increases of \$480.00 are ordinarily granted. Under unusual circumstances higher stipends may be permitted. For a full academic program, complete tuition and fees are paid; for other programs, a sum not to exceed \$1,250.00 including tuition may be arranged. Applications must be received by February 1 for consideration approximately May 1, 1960, by August 1 for consideration by November 1, 1960 and November 1 for consideration by February 1, 1961. Further information may be obtained from Division of Scholarships and Fellowships, Department of Professional Education, The National Foundation, 800 Second Street, New York 17, New York.

* * *

The U. S. Public Health Service has issued revised copies of the booklet **Immunization Information for International Travel**, and has announced that previous issues of the booklet and its supplement should be destroyed.

Additional copies of the new booklet may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 30 cents a copy.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

CLINICAL POSTGRADUATE PROGRAM—MEXICO CITY, IN COOPERATION WITH THE NATIONAL SCHOOL OF MEDICINE, MEXICO CITY. Anesthesiology, Gastroenterology, Dermatology, Cardiology, Pediatrics and General Surgery. February 25 through March 5, 1960.

Clinical Traineeships—Anesthesia, Dermatology and Pediatric Cardiology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, \$150.00; four weeks, \$250.00.

* Fees to be announced.

† Dates, fees and hours to be announced.

Geriatrics in Clinical Practice. Saturday and Sunday, March 19 and 20. 12 hours.*

Inhalation Therapy and Office Proctology. April.†

Plastic Surgery of the Eye. May.†

Clinical Laboratory Interpretation. Thursday, Friday and Saturday, June 23, 24 and 25. Eighteen hours.*

Management of Medical Emergencies. Friday and Saturday, July 15 and 16. 12 hours.*

General Pediatrics. Sunday through Wednesday, July 17 through 20. Lake Arrowhead, University of California Conference Center. Fifteen hours.*

Advance Seminar in Internal Medicine. Wednesday through Sunday, July 20 through 24. University of California Conference Center, Lake Arrowhead. Eighteen hours.*

Dermatology for General Practitioners. Monday and Tuesday, July 25 and 26. Twelve hours.*

Anesthesiology. Wednesday, Thursday and Friday, August 3, 4 and 5. Eighteen hours.*

The Multiple Injury Patient. Thursday, Friday and Saturday, August 11, 12 and 13. Eighteen hours.*

For Ancillary Personnel

Practical Clinical Chemistry for Laboratory Technologists—Advanced. Wednesdays, January 13 through March 2. Twenty-four hours. Fee: \$35.00, Lecture and Lab. \$20.00, Lecture only.

Vision Screening Techniques in the Classroom. Tuesdays, February 9 through May 24. Thirty hours. Fee: \$25.00.

Prevention and Control of Disease. Wednesdays, February 10 through June 15. Forty-five hours. Fee: \$35.00.

Medical Terminology—Advanced. Tuesdays, February 16 through June 21. Forty-five hours. Fee: \$35.00.

Beginning Medical Terminology. Wednesdays, February 17 through June 22. Forty-five hours. Fee: \$35.00.

Pathological Physiology in Physical Treatment Procedures. Mondays, February 29 through April 25. Sixteen hours. Fee: \$30.00.

Workshop in Practical Tuberculous Bacteriology. Saturday, March 5. Eight hours. Fee: \$5.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. Bradshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Radiological Physics (limited to 12). Every other Monday evening, January 12 through April 29. For Residents. Fee: \$50.00.

Man and His Environment—The Air He Breathes. Saturday through Monday, January 16 through 18. Twenty-one hours. Fee: \$40.00.

Common and Uncommon Drugs for Children. Thursday through Saturday, January 21 through 23. Twenty-one hours. Fee: \$50.00.

Seminars on the Psychological Aspects of Medical Practice—Series II. Every other Thursday evening, February 4 through May 19. Alameda-Contra Costa Medical Association Building, Oakland. Fee: \$40.00.

Course for Physicians in General Practice (Mt. Zion Hospital, San Francisco). Monday through Saturday, March 7 through 12. Thirty-eight hours.*

Diagnostic Radiology. Wednesday through Sunday, March 16 through 20. Thirty-five hours.*

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: \$350.00.

For Ancillary Personnel

Dermatology for Pharmacists. Thursday and Friday, January 21 and 22. Fourteen hours. Fee: \$30.00.

Nursing and People (limited to 25). Monday through Friday, January 25 through February 5. Thirty hours. Fee: \$30.00.

Team Nursing. Tuesdays, February 9 through March 29. Sixteen hours. Fee: \$15.00.

Advances in Psychiatric Nursing: Section I.—All registered nurses. Wednesday, February 24 through April 13. Sixteen hours. Fee: \$30.00.

Advances in Psychiatric Nursing: Section II.—Nurses who have had training and practice in Psychiatric Nursing. Thursdays, February 25 through April 14. Sixteen hours. Fee: \$30.00.

Rehabilitation Nursing. Monday through Friday, April 11 through 29. Fairmont Hospital, San Leandro.*

Nursing Care of Mothers and Children. Tuesdays, April 19 through June 7, Highland Hospital, Oakland. Sixteen hours. Fee: \$25.00.

Nursing Care of Medical-Surgical Patients. Thursdays, April 21 through June 9. Highland Hospital, Oakland. Sixteen hours. Fee: \$25.00.

Continuing Education Conference. Monday through Friday, June 13 through 17.*

Medical Health Principles in Baccalaureate Nursing Education. June 20 through July 29.*

Contact: Seymour M. Farber, M.D., Assistant Dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MONTrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday. **Contact:** D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, Stanford Hospital, Clay and Webster Streets, San Francisco.

For information contact: Dean, Stanford University School of Medicine, 300 Pasteur Drive, Palo Alto.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians \$30.00. (Each session 'all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: \$100.00.

*Fees to be announced.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: \$85.00. Physicians may register at any time.

Advances in the Diagnosis and Treatment in Gastroenterology. Friday through Sunday, January 15 through 17. Twenty-one hours. Fee: \$75.00 including lunch.

Bedside Cardiology. Thursdays, February 4 through April 21. Twenty-four hours. Fee: \$65.00.

Therapeutic Interviewing. Thursdays, February 11 through April 28. Twenty-four hours. Fee: \$100.00.

Symposium on Hypertension. Friday, March 11. Seven hours. Fee: \$7.50.

Dermatology Clinic, One-Day Symposium. Thursday, March 24. Seven hours. Fee: \$25.00.

Funduscopy in Internal Medicine. Every other Tuesday, April 5 through June 14. Twelve hours. Fee: \$37.50.

Ward Walks in Rare Diseases. Thursdays, April 14 through June 16. Twenty hours. Fee: \$100.00.

Practical Diagnosis and Management of Cardiovascular Diseases. Dates to be announced. Twenty-one hours. Fee: \$75.00.

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. Capital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

CLINICAL TRAINEESHIPS available in all clinical departments by arrangement with the Postgraduate Division and the Chairman of the department or departments involved. Eighty hours minimum. Fee: As arranged.

Diseases of the Chest: Two and four-week Traineeships in cooperation with the Los Angeles County Hospital. Dates as arranged.

Anesthesia. Monday through Friday. Date as arranged. Six months. Fee: \$350.

SPECIAL SKILLS available in the clinical departments, usually with a maximum of two or three students.

Surgical Anatomy: Thorax, Abdomen, Pelvis, January 4 through April 13. 121 hours. Fee: \$125.00. Head and Neck, April 20 through June 1, 63 hours. Fee: \$75.00.

Surgical Anatomy: Thorax, Abdomen, Pelvis, January 6 through April 13. Twenty-eight hours. Fee: \$50.00. Head and Neck, April 20 through June 1. Twenty-four hours. Fee: \$35.00.

ALUMNI POSTGRADUATE CONVENTION, held annually in cooperation with the Alumni Association of the School of Medicine. Refresher Courses, Sunday and Monday, February 28 and 29, at White Memorial Hospital, 1720 Brooklyn Avenue. Six hours each day. Fee: \$20.00 each day. Scientific Assembly, Tuesday through Thursday, March 1 through 3, at the Ambassador Hotel. Twenty-four hours. Fee: \$15.00. **Contact:** Walter Crawford, executive secretary, 316 N. Bailey Street, Los Angeles 33, ANgelus 2-2173.

TRAUMATOLOGY, a complete review including fractures and dislocations, soft tissue injuries, as well as complications involving the 3 cavities: Calvarium, thorax and abdomen. Limited to 15 candidates. Includes basic sciences, lectures, clinical demonstrations. Monday through Friday, March 7 through 11. Thirty-six hours. Fee: \$100.00.

TROPICAL PUBLIC HEALTH: Causes, treatment and management of diseases found in the warm climates. For physicians who plan to serve abroad and other ancillary personnel. Monday through Friday, April 1 through May 30. Fee: \$65.

JOINT MANIPULATION. Monday through Friday, 8:00 to 12:00, dates to be arranged. Twenty hours. Fee: \$75.00.

For information contact: G. E. Norwood, M.D., assistant dean and chairman, Division of Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33. ANgelus 9-7241, Ext. 214.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

ANNUAL SESSION POSTGRADUATE COURSES

Infectious Diseases. 9 hours. Sunday, Monday and Tuesday, February 21, 22 and 23, 9:00 to 12:00 noon. February 21 at Chapman Park Hotel, February 22 and 23 at Ambassador Hotel, Los Angeles. Program by University of California School of Medicine, Los Angeles.

Clinical Endocrinology. 9 hours. Sunday, Monday and Tuesday, February 21, 22 and 23, 9 to 12 noon. February 21 at Los Angeles County Hospital, February 22 and 23 at Ambassador Hotel. Program by University of Southern California School of Medicine.

Minor Surgery. 9 hours. Sunday, Monday and Tuesday, February 21, 22 and 23, 9 to 12 noon. All sessions at White Memorial Hospital, Los Angeles. Program by College of Medical Evangelists.

POSTGRADUATE INSTITUTES—1960 (Tenth Anniversary Year)

West Coast Counties in cooperation with University of California, San Francisco, February 4 and 5. Del Monte Lodge, Pebble Beach. Chairman: Robert A. Helfrich, M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with College of Medical Evangelists, March 31 and April 1. Flamingo Hotel, Santa Rosa. Chairman: H. Ward Wick, M.D., 858 Fourth Street, Santa Rosa.

Southern Counties in cooperation with Stanford University School of Medicine, April 21 and 22. Palm Springs Riviera. Chairman: Robert M. Zweig, M.D., 7004 Magnolia, Riverside.

San Joaquin Valley Counties in cooperation with University of Southern California School of Medicine, April 28 and 29. Ahwahnee Hotel, Yosemite. Chairman: Campbell H. Covington, M.D., 2057 High Street, Selma.

Sacramento Valley Counties in cooperation with UCLA School of Medicine, July 1 and 2. Tahoe Tavern, Lake Tahoe. Chairman: Herbert W. Korngold, M.D., 1217 30th Street, Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

AUDIO-DIGEST FOUNDATION, a nonprofit subsidiary of the C.M.A., offers (on a subscription basis) a series of six different hour-long tape recordings covering general practice, surgery, internal medicine, obstetrics and gynecology, pediatrics and anesthesiology. Designed to keep physicians posted on what is new and important in their respective fields, these programs survey current national and international literature of interest and contain selected highlights of on-the-spot recordings of national scientific meetings, panel discussions, symposia, and individual lectures. For information contact Mr. Claron L. Oakley, Editor, 1919 Wilshire Blvd., Los Angeles 57, HUbbard 3-3451.

Medical Dates Bulletin

JANUARY 1960 MEETINGS

MARIN COUNTY HEART ASSOCIATION Cardiac Resuscitation. Each Saturday morning 8:30 to 12 noon, January 9 through February. Marin General Hospital. Contact: Jean M. Brown, executive director, 2044 Fourth Street, San Rafael. GLENwood 4-7347.

LOS ANGELES COUNTY HEART ASSOCIATION Fourth Annual Midwinter Symposium. January 13, 9:00 a.m. Statler-Hilton Hotel. Contact: Walter S. Graf, M.D., Chairman, Professional Symposium Committee, Los Angeles County Heart Association, 660 So. Western Avenue, Los Angeles 5.

THE RESEARCH STUDY CLUB OF LOS ANGELES Twenty-Ninth Annual Mid-Winter Convention in Ophthalmology and Otolaryngology. January 18 through 22. Ambassador Hotel, Los Angeles. Contact: Norman Jesberg, M.D., treasurer, 500 South Lucas Avenue, Los Angeles 17.

DIABETES AND BASIC METABOLIC PROBLEMS Eighth Postgraduate Course. January 20 through 22. Ambassador Hotel, Los Angeles. Contact: American Diabetes Association, Inc., 1 East 45th Street, New York 17, New York.

ORANGE COUNTY HEART ASSOCIATION Annual Symposium on Heart Disease. January 23, 8:30 a.m. to 5:30 p.m. Gourmet Restaurant, Disneyland Hotel, Anaheim. Contact: Howard G. Buswell, Executive Director, P. O. Box 1704, Santa Ana, KIMberly 7-5976.

WESTERN ASSOCIATION OF PHYSICIANS. January 27 through 29. Carmel, California. Contact: Wade Volwiler, M.D., secretary, Department of Medicine, University of Washington, Seattle 5.

WESTERN SOCIETY FOR CLINICAL RESEARCH. January 28 through 30. Carmel-by-the-Sea. Contact: William N. Valentine, M.D., secretary, UCLA Medical Center, Department of Medicine, Los Angeles 24.

FRESNO COUNTY HEART ASSOCIATION Central California Eighth Annual Physicians Symposium. January 29, 8:30 a.m. to 5:30 p.m. Elks Club, Kings Canyon Road, Fresno. Contact: Max S. Millar, M.D., Chairman, Professional Services Committee, Fresno County Heart Association, 329 No. Van Ness, Fresno 1.

FEBRUARY MEETINGS

CONTRA COSTA COUNTY HEART ASSOCIATION Postgraduate Course for Physicians. Eight 2-hour weekly meetings. Monday, 8 to 10 p.m., beginning February 1. Contra Costa County Hospital. *Contact:* (Mrs.) Loye C. Casebolt, executive director, 2030 N. Main Street, Walnut Creek.

BUTTE-GLENN COUNTIES HEART ASSOCIATION Cardiovascular Disease Symposium. February 3. Chico Elks Lodge, 9 a.m. to 5 p.m. *Contact:* Nathan C. Hanson, executive director, 310 Main Street, Room 215, Chico.

AMERICAN COLLEGE OF PHYSICIANS Annual Southern California Regional Meeting. February 6 and 7. Hotel del Coronado, Coronado. *Contact:* George C. Griffith, M.D., Governor for Southern California, A.C.P., P. O. Box 25, 1200 North State St., Los Angeles 33.

LOS ANGELES OBSTETRICAL AND GYNECOLOGICAL SOCIETY, Forum for the younger specialists and residents. February 6 and 7, Ambassador Hotel, Los Angeles. *Contact:* Kenneth F. Morgan, M.D., Suite 910, 2010 Wilshire Blvd., Los Angeles 57.

OBSTETRICAL AND GYNECOLOGICAL ASSEMBLY OF SOUTHERN CALIFORNIA 15th Annual Mid-Winter Clinical Assembly. February 8 through 12. Ambassador Hotel, Los Angeles. For information write Frances W. Shippey, P. O. Box 57118, Flint Station, Los Angeles 57.

CALIFORNIA MEDICAL ASSOCIATION Annual Meeting, February 21 through 24, Ambassador Hotel, Los Angeles. *Contact:* John Hunton, executive secretary, 693 Sutter Street, San Francisco 2; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

PACIFIC COAST SURGICAL ASSOCIATION Annual Meeting. February 21 through 24. Palm Springs. *Contact:* Carleton Mathewson, M.D., professor of surgery, Stanford Hospital, San Francisco.

MARCH MEETINGS

SOUTHWESTERN PEDIATRIC SOCIETY Spring Lecture Series, March 1 and 2, Statler Hotel, Los Angeles. *Contact:* Wendell Severy, M.D., program chairman, 11633 San Vicente Blvd., Los Angeles 49.

PIONEERS MEMORIAL HOSPITAL MEDICAL STAFF in association with the University of Oklahoma School of Medicine, Tenth Annual Postgraduate Assembly. March 18 and 19. Pioneers Memorial Hospital, Brawley. *Contact:* George C. Holleran, M.D., program chairman, P. O. Box 159, Brawley.

SOUTHWESTERN SURGICAL CONGRESS. March 28 through 31, Riviera Hotel, Las Vegas, Nevada. *Contact:* Miss Mary O'Leary, executive secretary, 1213 Medical Arts Building, Oklahoma City, Oklahoma.

NEUROSURGICAL SOCIETY OF AMERICA. March 30 through April 2, Del Monte Lodge, Del Monte. *Contact:* Raymond K. Thompson, M.D., secretary, 803 Cathedral Street, Baltimore 1.

APRIL MEETINGS

AMERICAN SOCIETY OF INTERNAL MEDICINE. April 1 through 3. Mark Hopkins Hotel, San Francisco. *Contact:*

act: Mr. Robert L. Richards, executive director, 350 Post Street, San Francisco 8.

AMERICAN COLLEGE OF PHYSICIANS Annual Meeting, April 4 through 9. Mark Hopkins and Fairmont Hotels, San Francisco. *Contact:* E. R. Loveland, executive secretary, 4200 Pine Street, Philadelphia 4.

CALIFORNIA MEDICAL ASSISTANTS ASSOCIATION Annual Convention. April 23 and 24. Claremont Hotel, Berkeley. *Contact:* Mrs. Anne Reece, President CMAA, 1837 So. Indiana St., Porterville, California.

HAWAII MEDICAL ASSOCIATION Annual Meeting. April 28 through May 1. *Contact:* Miss Lee McCaslin, executive secretary, 510 S. Beretania, Honolulu 13.

MAY MEETINGS

PAN AMERICAN MEDICAL ASSOCIATION CONGRESS. May 2 to 11. Mexico City. *Contact:* Joseph J. Eller, M.D., director general, 745 Fifth Avenue, New York, N. Y.

MEMORIAL HOSPITAL OF LONG BEACH Medical Staff 2nd Annual Scientific Symposium "New Horizons in Medicine," to be held in conjunction with the formal opening of the new 400-bed Memorial Hospital of Long Beach. May 4. *Contact:* George X. Trimble, M.D., director of medical education, Seaside Memorial Hospital, 1401 Chestnut Avenue, Long Beach 13.

VALLEY CHILDREN'S HOSPITAL Spring Clinics. May 5 through 7. Roosevelt High School auditorium, Fresno. *Contact:* Valley Children's Hospital, Shields and Millbrook Avenues, Fresno.

NEVADA ACADEMY OF GENERAL PRACTICE 1960 Annual Assembly. May 12 through 14. Riverside Hotel, Reno, Nevada. Scientific program by University of California School of Medicine. *Contact:* Roy M. Peters, M.D., general chairman, 475 So. Arlington, Reno, Nevada.

NATIONAL TUBERCULOSIS ASSOCIATION—AMERICAN Trudeau Society Annual Meeting. May 16 through 19. Statler Hilton and Biltmore Hotels, Los Angeles. *Contact:* Mr. Sherman Asche, general chairman, Annual Meeting Committee, P. O. Box 4037, Santa Barbara.

AMERICAN COLLEGE OF NUTRITION 1960 Annual Convention, May 20 through 22. Huntington Sheraton Hotel, Pasadena. *Contact:* Donald B. Haynie, executive secretary, 10651 West Pico Blvd., Los Angeles 64.

CALIFORNIA HEART ASSOCIATION Annual Meeting and Scientific Session. May 23 through 25. Claremont Hotel, Berkeley. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

FALL 1960 MEETINGS

PAN-PACIFIC SURGICAL ASSOCIATION 8th Intensive Surgical Congress, embracing all Surgical Specialties. September 28 through October 5. Honolulu, Hawaii. *Contact:* F. J. Pinkerton, M.D., director general, Suite 230, Alexander Young Building, Honolulu 13.

WESTERN INDUSTRIAL MEDICAL ASSOCIATION combined Meeting with 4th Western Industrial Health Conference. October 7 through 9. Jack Tar Hotel, San Francisco. *Contact:* Vern G. Ghormley, M.D., president, 3032 Tulare Street, Fresno 21.

California MEDICINE

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| <p>(Or.)—Original Article; (Ed.)—Editorial; (CMA)—California Medical Association; (CR)—Case Report; (I)—Information; (LE)—Letters to the Editor; (PE)—Page End; (MJ)—Medical Jurisprudence.</p> | | | |

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CANCER COMMISSION
CALIFORNIA MEDICAL ASSOCIATION

PRE-CONVENTION CONFERENCES

LOS ANGELES • SATURDAY, FEBRUARY 20

Radiology

West Venetian Room, Ambassador Hotel

Chairman Merrell A. Sisson, M.D., San Francisco
Secretary D. J. Sayles, M.D., San Diego

DIAGNOSTIC SESSION—9:30 a.m. to noon

Twelve diagnostic cases with histories and films will be presented. Cases have been selected to illustrate specific problems in the radiological and clinical diagnosis of cancer. Audience participation and discussion are urgently requested.

THERAPY SESSION—2:00 p.m. to 4:30 p.m.

Five cases with specific therapy problems will be presented. The audience is asked to participate actively.

Pathology

9:15 a.m. to noon • 2:00 p.m. to 4:30 p.m.

East Venetian Room, Ambassador Hotel

Moderator: GEORGE J. HUMMER, M.D., Santa Monica

The Pre-Convention Conference on the Lymphomas will be conducted under the chairmanship of Frank R. Dutra, M.D., Castro Valley.

Members who wish to attend this conference are requested to register now with Weldon K. Bullock, M.D., Registrar, Tumor Tissue Registry, C.M.A. Cancer Commission, Los Angeles County Hospital, 1200 North State Street, Los Angeles 33.

7:00 p.m.

Dinner meeting of the California Society of Pathologists. For reservations contact Ernest Simard, M.D., Secretary, 708 Cass Street, Monterey.

Cancer Commission Dinner

6:30 p.m.—Frenchette Room

Annual Dinner Meeting of the Cancer Commission and Advisory Committee.

CALIFORNIA
MEDICAL
ASSOCIATION

Scientific Sessions

•
Postgraduate Courses

•
*Meetings of the
House of Delegates*

89th
Annual Session



Ambassador Hotel

LOS ANGELES

February 21 to 24, 1960



T. ERIC REYNOLDS
President



PAUL D. FOSTER
President-Elect

Scientific Program

**CALIFORNIA
MEDICAL
ASSOCIATION**

*Eighty-ninth
Annual Session*

**Ambassador Hotel
LOS ANGELES
FEBRUARY 21-24*
1960**

***House of Delegates
Opening Meeting
February 20
7:30 p.m.**

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Guest Speakers



LAUREN V. ACKERMAN



OLIVER COPE



ALBERT SEGALOFF



WM. BARRY WOOD, JR.

Guest Speakers

LAUREN V. ACKERMAN, M.D., St. Louis, Missouri—Professor of Surgical Pathology and Pathology, Washington University School of Medicine.

OLIVER COPE, M.D., Boston, Massachusetts—Associate Professor of Surgery, Harvard Medical School, Visiting Surgeon, Massachusetts General Hospital.

ALBERT SEGALOFF, M.D., New Orleans, Louisiana—Associate Professor of Clinical Medicine, Tulane University of Louisiana School of Medicine, and Director of Endocrine Research, Alton Ochsner Medical Foundation.

WM. BARRY WOOD, JR., M.D., Baltimore, Maryland—Professor of Microbiology and Director of the Department of Microbiology, Johns Hopkins University Schools of Medicine, and Hygiene and Public Health.

SPECIAL GUESTS OF SECTIONS

J. PALMER DEARING, M.D., Washington, D.C.—Director of Health Services, Office of Civil Defense and Mobilization.

J. R. BETSON, JR., M.D., Albuquerque, New Mexico—Obstetrician and Gynecologist, Lovelace Clinic.

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Information

BADGES. It is important that badges be worn at all times. Admission to scientific meetings is by badge only.

COUNCIL. Frenchette Room. The first meeting of the Council will be held Saturday, February 20 at 9:30 a.m. Further meetings will be held each morning at 7:30 a.m.

EMERGENCY CALLS AND MESSAGES. Each physician should notify his own secretary regarding the *exact* section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will *attempt* to transmit messages to the individual physician.

In case of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the Los Angeles County Medical Association, Hubbard 3-1581.

EXHIBITS. Technical Exhibits — Ballroom, Sunset Room and Boulevard Room, Casino Floor.

Scientific Exhibits—South end of the Sunset Room and the north end of the Boulevard Room, Casino Floor. See list on page 37.

Medical Motion Pictures will be shown in the Colonial Room. See program synopsis, page 33.

You are urged to visit and attend all exhibits.

MEETING TIMES AND PLACES. See chart on page 9 for exact times and places of general and section meetings.

REGISTRATION. Registration and information desks are located in the Ballroom Foyer, Casino Floor. *All members, guests, and visitors are requested to register immediately on arrival.* There is no charge for registration, except for Postgraduate Courses. Registration desks are open Saturday through Wednesday. *Admission to the general and section sessions and exhibits areas is by badge only.*

QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION. (a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association or A.M.A. membership card.) (b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. (A membership card of the Student American Medical Association or letter from their dean's office.) (c) Medical secretaries will be admitted upon presentation of a letter from the physician-employer. (d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer. (e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), student nurses, x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification. (f) *All questions on admission will be passed upon by a member of the Committee on Registration who will be present at the desk.*

Other Meetings and Entertainment

• SATURDAY, FEBRUARY 20

C.M.A. HOUSE OF DELEGATES OPENING SESSION —Embassy Room, 7:30 p.m.

C.M.A. Cancer Commission Conferences on Radiology and Pathology—East Venetian Room, Pathology; West Venetian Room, Radiology, 9:15 a.m. to 4:30 p.m.

C.M.A. Cancer Commission Dinner—Frenchette Room, 6:00 p.m.

California Chapter of the American College of Chest Physicians Meeting and Reception—Embassy Room, Meeting, 9:00 a.m. to 5:00 p.m.; Reception, Regency Room, 5:00 to 7:00 p.m.

• SUNDAY, FEBRUARY 21

PRESIDENTS' DINNER DANCE—Cocoanut Grove, Ambassador Hotel, 8:00 p.m. Formal dress optional. Honoring the Presidents of the California Medical Association

and the Woman's Auxiliary. Tickets on sale in the Main Floor Lobby.

C.M.A. Section on Allergy and California Society of Allergy Luncheon—Oval Room "A," 12:30 p.m.

C.M.A. Section on Allergy and California Society of Allergy Reception and Dinner—Reception at 7:00 p.m., Lido Room; Dinner Dance at 8:00, Cocoanut Grove (Joining C.M.A. Presidents' Dinner Dance).

C.M.A. Section on Orthopedics Luncheon—Regency Room, 12:30 p.m.

• MONDAY, FEBRUARY 22

A.M.A. Delegates Meeting—Lido Room, 2:00 p.m.

• TUESDAY, FEBRUARY 23

Local County Health Officers and County Society Officers Meeting—West Venetian Room, 2:00 p.m.

SCIENTIFIC SESSIONS

| LOCATION | SUNDAY FEBRUARY 21 | | | MONDAY FEBRUARY 22 | | | TUESDAY FEBRUARY 23 | | | WEDNESDAY FEBRUARY 24 | | |
|---|--|---|--|--|---------------------------------------|--|---|--|---------------------------------|--------------------------|---|--|
| | A.M. | P.M. | | A.M. | P.M. | | A.M. | P.M. | A.M. | A.M. | P.M. | |
| AMBASSADOR HOTEL (Lobby Floor) | | | | | | | | | | | | |
| Embassy Room | 9:30 a.m. [†] House of Delegates | 2 p.m. General Meeting Parathyroid Diseases | | 2 p.m. General Meeting Advanced Malignant Disease | | | 2 to 3:30 p.m. General Meeting 3:30 to 5:30 p.m. Clinical—Patho- logical Conference | | 9:30 a.m. House of Delegates | | | |
| East Venetian Room | 9 a.m. Pathology | | | 9 a.m. Internal Medicine | | | | | 9 a.m. Public Health | | 2 p.m. Psychiatry | |
| West Venetian Room | 9 a.m. Radiology | 4 p.m. Radiology | | 9 a.m. Obstetrics and Gynecology | | | 9 a.m. Special Meeting Disaster Medical Care | | 9 a.m. Pediatrics | | 2 p.m. General Practice, Obstetrics, Pediatrics, Public Health | |
| Colonial Room | 9 a.m. General Surgery | 2 p.m. Film Symposium | | 9 a.m. Film Symposium | 2 p.m. and 8 p.m. Film Symposia | | 9 a.m. Film Symposium | 3:45 p.m. and 8 p.m. Film Symposia | 9 a.m. Film Symposium | | 2 p.m. Film Symposium | |
| Grove Lounge | 9 a.m. Dermatology | | | 9 a.m. Ear, Nose and Throat | | | | | 9 a.m. Urology | | 2 p.m. Urology | |
| Lido Room | 9 a.m. Industrial Medicine and Surgery | 2 p.m. Ind. Med. & Surg., Physical Medicine | | 9 a.m. Physical Medicine | | | | | | | | |
| Regency Room | 9 a.m. Orthopedics | | | 9 a.m. Postgraduate Course U.S.C.—Endocrinology | 2 p.m. Eye | | 9 a.m. Postgraduate Course U.S.C.—Endocrinology | | 9 a.m. Neurology | | 2 p.m. Anesthesiology | |
| Oval Room A (Casino Floor) | 9 a.m. Allergy | | | 9 a.m. Postgraduate Course U.C.L.A. Infectious Diseases | | | 9 a.m. Postgraduate Course U.C.L.A. Infectious Diseases | | | | | |
| WHITE MEMORIAL HOSPITAL (Sunday only) | 9 a.m.* (Bus at 8 a.m.*) Postgraduate Course C.M.E.—Minor Surgery | | | 9 a.m.* (Bus at 8 a.m.*) Postgraduate Course C.M.E.—Minor Surgery | | | 9 a.m.* (Bus at 8 a.m.*) Postgraduate Course C.M.E.—Minor Surgery | | | | | |
| L. A. COUNTY HOSPITAL (Sunday only) | 9 a.m.* (Bus at 8 a.m.*) Postgraduate Course U.S.C.—Endocrinology | | | | | | | | | | | |
| CHAPMAN PARK HOTEL (Sunday only) | 9 a.m. Postgraduate Course U.C.L.A. Infectious Diseases | | | | | | | | | | | |

*Buses will leave Ambassador Hotel, Wilshire entrance, at 8:00 a.m.

[†]Opening meeting, House of Delegates, 7:30 p.m., Saturday, Feb. 20.

TECHNICAL EXHIBITS—Sunset Room, Ballroom and Boulevard Room, Casino Floor.
SCIENTIFIC EXHIBITS—North End, Boulevard Room; South End, Sunset Room, Casino Floor.
COUNCIL OF THE C.M.A. MEETS DAILY AT 7:30 A.M. IN THE FRENCHETTE ROOM

SCIENTIFIC SESSIONS

GENERAL MEETINGS

FIRST GENERAL MEETING

SUNDAY, FEBRUARY 21

2:00—Embassy Room

Symposium

Parathyroid Disorders—Diagnosis and Treatment

Moderator: William F. Pollock, M.D.
Santa Monica

2:00—The Diagnosis and Differential Diagnosis of Hyperparathyroidism—Gilbert S. Gordan, M.D., San Francisco.

2:30—The Application of the Newer Tests in Parathyroid Disease—Telfer B. Reynolds, M.D., Los Angeles.

3:00—Hyperparathyroidism—Surgical Experiences in the Treatment of 225 Cases Over 25 Years—Oliver Cope, M.D., Boston, Massachusetts, by invitation.

3:30—Recent Advances in Homotransplantation Techniques for Total Parathyroid Deprivation—Alex Gerber, M.D., Alhambra.

3:50—Panel Discussion—Questions and Answers. Members of the audience are strongly urged to submit questions to the panel.

SECOND GENERAL MEETING

MONDAY, FEBRUARY 22

2:00—Embassy Room

Symposium

The Management of Advanced Malignant Disease

Moderator: Edward Shapiro, M.D., Beverly Hills

2:00—Prognostic Evaluation of Advanced Malignant Disease by the Pathologist—Lauren V. Ackerman, M.D., St. Louis, Missouri, by invitation.

2:30—Hormonal Alterations as a Treatment—Albert Segaloff, M.D., New Orleans, Louisiana, by invitation.

3:00—Contrasts and Enigmas in Thyroid Cancer—Oliver Cope, M.D., Boston, Massachusetts, by invitation.

3:30—The Place of Chemotherapy—Jesse Steinfield, M.D., Los Angeles.

4:00—Palliation by Radiation—Malcolm A. Bagshaw, M.D., Palo Alto.

4:30—Panel Discussion with questions submitted from the audience.

SPECIAL MEETING

TUESDAY, FEBRUARY 23

9:00—West Venetian Room

Symposium

Disaster Medical Care

Chairman: Justin J. Stein, M.D., Los Angeles

9:00—Address of Welcome—T. Eric Reynolds, M.D., President, California Medical Association, Oakland.

9:05—Introduction to Seminar—Justin J. Stein, M.D., Chairman, California Medical Association Committee on Civil Defense and Disaster, Los Angeles.

9:15—The Federal Disaster Medical Care and Shelter Program—W. Palmer Dearing, M.D., by invitation, Director, Health Services, Office of Civil Defense and Mobilization, Washington, D. C.

9:35—Discussion of the Progress of the Disaster Program in California—Harold G. Robinson, by invitation, Director, State of California Disaster Office, Sacramento.

9:55—Status of Medical Preparations for Disaster in California—Frank L. Cole, M.D., by invitation, Chief, Medical and Health Division, State of California Disaster Office, Berkeley.

10:15—Problems Concerning Radioactivity and Radioactive Fall-Out During a Disaster—Simon Kinsman, Ph.D., by invitation, Radiological Health Consultant, Region IX, United States Public Health Service, San Francisco.

10:35—Intermission.

10:45—The Current Status of Bacterial and Chemical Warfare—Cecil H. Coggins, M.D., by invitation, Assistant Chief, Medical and Health Division, State of California Disaster Office, Sacramento.

11:05—The Objectives and Functions of the Committee on Disaster Medical Care of the American Medical Association, and

The Organization of a County Medical Society for Disaster Medical Care—Wayne P. Chesbro, M.D., Chief, Medical and Health Services, Region II, State of California, Berkeley.

11:20—Problems Associated with Medical Disaster Care Preparations in Region I (Includes Los Angeles Area)—Frank F. Schade, M.D., Chief, Medical and Health Services, Region I, State of California, Los Angeles.

11:40—Question and Answer Period.

Moderator: Justin J. Stein, M.D., Los Angeles
All panelists will be available for questions from the audience

THIRD GENERAL MEETING

TUESDAY, FEBRUARY 23

2:00—Embassy Room

Moderator: Thomas H. Brem, M.D., Los Angeles

2:00—The Indications and Hazards of Corticosteroid Treatment—Albert Segaloff, M.D., New Orleans, Louisiana, by invitation.

2:45—The Limitations of Antimicrobial Therapy—
William Barry Wood, Jr., M.D., Baltimore, Maryland, by invitation.

3:30—Clinical-Pathological Conference

Moderator: Thomas H. Brem, M.D., Los Angeles

Members of the Panel:

Pathologist: Lauren V. Ackerman, M.D., St. Louis, by invitation.

Surgical Consultant: Oliver Cope, M.D., Boston, by invitation.

Medical Consultant: Albert Segaloff, M.D., New Orleans, by invitation.

Five cases will be presented. Members of the panel will discuss each from the medical, surgical and pathological aspects.

Following are cases to be presented at the Clinical-Pathological Conference

CASE 1

A 63-year-old woman of Mexican extraction, who was first seen at the Los Angeles County Hospital in 1954, because of ulcers on the left leg, polyuria, polydipsia, and dyspnea. She was found to have diabetes mellitus, and her blood pressure was recorded as 200/100. She was treated with insulin and digitalis with much improvement.

During the following year she returned to the hospital on several occasions for varying symptoms. On one occasion she had diarrhea which subsided quickly, and on another she had fallen in the bathtub, injuring her back. X-rays showed generalized osteoporosis and a compression fracture L-1. Her diabetes appeared to be reasonably well controlled.

Her final admission was in January, 1956. This was occasioned by the sudden occurrence of anterior chest pain that had begun while she was sitting quietly. It was not accompanied by dyspnea, although it was aggravated somewhat by respiration. It radiated to both shoulders.

Physical examination disclosed a rather obese Mexican woman evidently in considerable pain. There was no particular dyspnea. The face was flushed. Temperature 99, respiration 18, blood pressure 200/100. The right fundus was obscured by a cataract, but the left appeared normal. Axillary lymph nodes were somewhat enlarged and apparently tender. The lungs were clear except for a few basal rales. The heart appeared to be enlarged with the apical impulse in the anterior axillary line. The sounds were clear, and there was a grade 2 systolic murmur in the second right intercostal space. The abdomen was obese and purplish striae were present in the flanks. No organs were palpable. Pelvic examination was normal. Old healed scars were present on the legs and no abnormal neurological signs were found.

The red blood count and hemoglobin were normal. The urine contained a few white blood cells but albumin, acetone, and sugar were absent. The electrocardiogram showed left ventricular hypertrophy only.

Serum sodium was 145 mEq./liter and CO₂ 29 mEq./liter.

The patient was treated symptomatically and the chest pain subsided without being identified as to cause. About two weeks after admission she became drowsy and lethargic without localizing signs. The serum sodium was 138 mEq./liter, potassium 2.5 mEq./liter, CO₂ 23 mEq./liter, and the nonprotein nitrogen 32 mgm. per cent.

The following day she was found to have a left hemiplegia with aphasia and inability to swallow. Blood pressure 170/80. Her condition deteriorated over the next few days with subsequent coma and death.

CASE 2

A 38-year-old unmarried white woman entered the hospital in April 1959 because of shortness of breath and swelling of the legs. Her history goes back to childhood when at six she had severe scarlet fever. Subsequently she was found to have a persistently rapid heart and complained of palpitation. In her late teens she began to limp, and a bowed tibia was found by her physician who ascribed it to calcium deficiency.

Menses began at 18 after a series of hormone injections. Periods were scant and infrequent, ceasing altogether at age 37. The breasts had never developed nor had axillary or pubic hair ever appeared.

At 24 a goiter was first noted. There was considerable emotional instability at this time, although "nervousness" had existed for many years. She subsequently fractured the right wrist three times with relatively minor trauma.

She had had polyuria, polydipsia and polyphagia for many years and six to eight soft bowel movements daily for as long as she could remember.

Physical examination on admission disclosed a thin, malnourished, very nervous woman looking considerably older than 38. There were many purposeless, fidgety motions of the hands. The skin was fine and soft and the hair sparse and silky. The blood pressure was 140/80, pulse 150 and grossly irregular, respiration 26 and temperature 101. There was obvious exophthalmos and lid lag. There was slight icterus of the sclerae. The pupils were normal, but the discs were distinctly pale, especially on the left, and a bitemporal visual field defect was easily demonstrated. The neck veins were distended, and the thyroid diffusely enlarged. The lungs were dull at bases with numerous rales. The heart was enlarged, the rate rapid, and rhythm grossly irregular with a pulse deficit of 30. A grade 2 systolic murmur was present over the whole precordium. Circulation time—10 seconds arm to tongue. Breasts were small and atrophic. The abdominal wall was edematous. The liver was moderately enlarged and tender. The genitalia were adolescent,

the cervix and uterus being infantile. The lower extremities were very edematous. There was a fine tremor of the extended hands. The reflexes were normal.

Laboratory examinations revealed a moderate anemia with a hemoglobin of 9.8 gm., a leukopenia of 2,700 with 53 per cent granulocytes and 47 per cent lymphocytes. The red cells were hypochromic but normal in size and shape. The urine was normal except for the presence of urobilinogen in a dilution of 1:128. Sulkowitch—trace.

A large variety of blood chemical determinations were made. The more important ones were: CO_2 29 mEq., phosphorus 3.2 mgm. per cent, calcium 8.3 mgm. per cent, alkaline phosphatase 4.4 units (normal 3), albumin 2.3 gm. per cent, globulins 4.7 gm. per cent, serum bilirubin 2.5 mgm. per cent with 1.5 mgm. direct, fasting blood sugar 104 mgm. and 2-hour postprandial blood sugar 140 mgm. per cent. Protein bound iodine 15 micrograms per cent, and cholesterol 72 mgm. per cent. Radioactive iodine uptake—79 per cent.

The patient was treated with digitalis and diuretics, and her congestive failure responded rapidly.

The following endocrine studies were performed:

Control

| | |
|---|--------------------------|
| Eosinophil count | 200 |
| 17-ketosteroids /24 hr. | 8.5, 4.5 and 0.5 mgm. |
| 17-ketogenic steroids /24 hr. | 10.2, 11.2 and 14.2 mgm. |
| Follicle stimulating hormone (mouse units) | 16, 5 and 5 |

ACTH (Intravenous)

| | |
|---|--------------------------|
| Eosinophil count | 50 |
| 17-ketosteroids /24 hr. | 6.5, 5.5 and 7.0 mgm. |
| 17-ketogenic steroids /24 hr. | 19.5, 20.7 and 24.8 mgm. |
| Follicle stimulating hormone (mouse units) | 16 and 5 |

Treatment has resulted in considerable improvement, but she has recently returned to her Christian Science practitioner.

CASE 3

The patient is a 48-year-old negro woman who entered the hospital because of fatigability and weakness, which she related to an attack of flu a month previously. She had been aware of hypertension for several years and had been under a doctor's care. She had never had symptoms of heart failure but recently had been troubled with headaches. Following the episode of flu she felt completely "run down" and had to quit her work as a domestic because of weakness of the legs.

The physical examination showed her to be well developed and in good nutrition. She was not acutely ill or in particular distress. The blood pressure was 240/140. The retinal arteries were somewhat narrowed but the discs appeared normal, and there were no hemorrhages. The lungs were clear and the heart was not appreciably enlarged nor were murmurs heard. The abdomen was negative. No edema was present, and the neurological examination was normal.

The routine blood count and urinalysis were normal. The concentration of the urine was persistently low, ranging from 1.005 to 1.009, and it was always alkaline in reaction with a pH of 7.5.

The blood urea nitrogen was 12 mgm., serum sodium 148 mEq., CO_2 39 mEq., chloride 93 mEq., and potassium 2.1 mEq.

A retigene test and urinary catecholamines were normal.

On a low sodium, high potassium diet, the CO_2 fell to 29 mEq. and the potassium increased to 3.8 mEq. On returning

to a regular hospital diet, the CO_2 increased to 33 and the potassium fell to 2.3 mEq. in eight days.

Arterial blood pH was found to be 7.52 and 7.51 and the carbon dioxide pressure 46 and 43 mm. of mercury (normal 40).

The patient was operated upon.

CASE 4

The patient is a 51-year-old Mexican male who came to the hospital because of palpitation and rapidity of the heart. He had had high blood pressure for several years that he knew of, but had not been troubled until about a year before when he sought medical help for right lower quadrant abdominal pain. His physician prescribed medicine for the hypertension and the pain disappeared.

About six months before admission he developed nervousness, vigorous heart action, excessive sweating, and tremor of the hands. He lost about twenty pounds despite a good appetite. His physician prescribed tablets which again produced relief of symptoms. However, he ran out of tablets and money. Because of a recurrence of symptoms he came to the county hospital.

Examination disclosed a well-nourished and well developed man in no acute distress. His blood pressure was 200/150 in both arms and the heart rate was 116 and regular. The hands were sweaty and cool. The optic fundi showed only some arteriovenous compression. The thyroid was not detectably enlarged. There was a vigorous systolic pulsation in the suprasternal notch. Lungs were clear. The heart appeared to be enlarged and its impulse forceful. No murmurs were present. No organs or masses were palpable in the abdomen. The genitalia were normal. Reflexes normal.

Laboratory examinations: Hemoglobin 17.5 gms., leukocyte content 11,000 with normal differential. Urinalysis: Specific gravity 1.020, albumin 3+, sugar negative. Microscopic negative.

Blood urea nitrogen—17 mgms. Blood sugar (2 hours postprandial) 210 mgm. Protein-bound iodine—7.8 micrograms per cent.

Chest x-ray: Heart and lungs normal.

The patient was treated with bed rest, reserpine and apresoline. The blood pressure fell to levels of approximately 160/80, but the heart rate remained around 110.

Radioiodine studies showed the uptake by the thyroid to be 28 per cent of the administered dose in twenty-four hours. The basal metabolic rate was +20 and the serum cholesterol 298 mgm.

A glucose tolerance test gave the following values: Fasting—113 mgm., $\frac{1}{2}$ hour—177, 1 hour—209, 2 hours—248, 3 hours—158, and 5 hours—112.

The patient was operated upon.

CASE 5

A 31-year-old white woman was first admitted to Barnes Hospital October 23, 1946 with chief complaint of umbilical hernia which she had had for many years and which had shown slight increase in size.

The only pertinent past history was that she had had two years of diarrhea consisting of 2 to 3 loose stools per day. Her blood pressure on admission was 95/50 and the physical examination was not remarkable except for the umbilical hernia. The only laboratory work which was done on this admission was routine blood count and urinalysis, both of which were within normal limits.

On October 25, 1946 she had repair of the umbilical hernia with a negative exploration of the abdomen and an incidental appendectomy. She was discharged November 6, 1946.

She was not seen here again until the time of her second admission from July 30, 1952 to December 23, 1952. At that time she stated that she had made a slow recovery from the previous operative procedure but had been plagued by constant right lower quadrant aching and a dragging sensation in that area. Consequently, 6 months after her first operation she was operated upon in her town and a "rotten" right ovary was removed.

Following this she did reasonably well, except that she continued to have diarrhea and shortly after that began to vomit. Both the diarrhea and the vomiting were progressive until February 1952 when she was having as many as 24 loose stools per day. These were on occasions tarry, but she denied the presence of bright red blood in them. The diarrhea was associated with cramping abdominal pain. The vomitus was green and consisted of undigested foods occurring immediately after she ate. In addition to the cramping abdominal pain she had burning epigastric pain which was relieved by food, and right upper quadrant pain which radiated to the scapula which was caused by food.

These symptoms had caused her to enter the hospital in her home town and there in February 1952 she had an upper gastrointestinal roentgen series which showed an "irritable stomach." Her only other complaints were slight dyspnea on exertion and ankle edema with easy fatigability.

On admission her blood pressure was 98/70 and she was a tired appearing, chronically ill woman. She showed clubbing of the fingers, diffuse spotty pigmentation which she said had been present all of her life, and diffuse abdominal tenderness. The admission diagnosis was regional ileitis or ulcerative colitis.

Routine blood count and urinalysis were normal. Stools were consistently guaiac positive and the vomitus was consistently guaiac negative. She had a fasting blood sugar of 44 mg. per cent which was checked on the following day and found to be 74 mg. per cent. The chloride was 80 mEq./liter and the total proteins were 5.8. Liver function tests, calcium and phosphorus were all within normal limits. Proctoscopy to 10 cm. was said to show greyish white edematous mucosa with focal bleeding points. She showed normal response to ACTH in the Thorne test.

She continued to complain of right upper quadrant pain, epigastric pain, and vomiting. A nasogastric tube was passed. On August 7, a gastrointestinal series showed "giant duodenal ulcer" and "atrophic small bowel patterns." Barium enema was reported as showing no specific abnormalities. She was started on a vigorous medical ulcer regime, but on August 8 she had an episode of sudden clinical shock with positive Troussseau's and negative Chovostek signs. She was treated empirically with calcium gluconate but chemistries showed normal calcium and phosphorus, a serum chloride of 56 mEq./liter and associated elevation in the CO₂. She responded well to appropriate parenteral therapy and continued on her ulcer regime.

She continued to have copious gastric secretions (2,000 to 4,000 ml. daily) which were continually guaiac negative until August 16 at which time she had two episodes of shaking chills, elevated temperature and again clinical shock. Again she responded to appropriate parenteral therapy and was soon thereafter treated with continuous aluminum hydroxide drip and more vigorous medical ulcer therapy. At that time her urine chloride excretion was 66 mEq./liter and the stools continued guaiac positive.

On August 25 she had 600 cc. of grossly bloody stools. She was subjected to an exploratory laparotomy on that date and the operative note described a large mass in the head of the pancreas which was thought to be inflammatory and was not biopsied. In addition, the wall of the gallbladder was greatly thickened and the gallbladder itself was distended. A large duodenal ulcer was felt. A posterior gastroenterostomy was done and a cholecystostomy. She was again started on ulcer regime but continued to vomit and had copious gastric secretions (2,000 to 5,000 ml. daily) so that one week after the first operation, on September 2, 1952, she had a feeding jejunostomy of the Wetzel type. This was followed by episodes of alkaloisis and tetany so that two weeks after the gastrojejunostomy, on September 9, 1952, she had a subtotal gastric resection, 75 to 80 per cent of the stomach was removed, and a posterior Polya type anastomosis was done. During the operative procedure a major pancreatic duct was cut and closed with heavy silk suture. The pathological report of the stomach showed no abnormalities.

In the immediate postoperative period she continued to have copious gastric secretions in the amount of 1,500 to 2,000 ml. per day. She had episodes suggestive of partial small bowel obstruction, continual substernal pain, continual diarrhea and finally, three weeks after the gastrectomy, she began to have voluminous pancreatic secretions pour from the abdominal wound. At this time also she developed thrombophlebitis of the right leg. The gastric secretions and the pancreatic secretions were returned through the feeding jejunostomy. At that point also for the first time a stool fat was done which was 1 plus, serum amylases during this period consistently ran 80 to 100, and the first gastric analysis which was done showed 10 units of free acid and 70 units of total acid. Her complaints continued the same so that on October 7, one month after the subtotal gastrectomy she was started on external roentgen therapy to the pancreatic region. Five days after this had been started the pancreatic secretion reached its peak amount of 3,000 ml. in one day. Following this the amount decreased rapidly so that on October 21, the last day of roentgen therapy, she had no pancreatic drainage. Her course continued the same until November 22, when she complained of severe dysphagia in addition to the aforementioned complaints which also persisted. Upper gastrointestinal series at this time showed stricture of the distal third of the esophagus with peptic ulceration in that area, distal bulbous enlargement and question of hiatus hernia. The question of a marginal ulcer was also raised.

On November 29 her white count was discovered to be 1,100 and a hematology consultant attributed this to the irradiation.

On December 22 she was clinically improved although still having considerable diarrhea with abdominal cramping pain, still having epigastric pain, but without pancreatic drainage. She was, therefore, discharged for Christmas.

The third Barnes Hospital admission came one week later, on December 26, 1952 until discharge January 20, 1953. At that time she complained only of an abscess in the area of the previous pancreatic fistula. The only laboratory work which was done was a white count which was 5,300. The abscess was incised and drained, with an uneventful course, and she was discharged.

She was not seen here again until time for the fourth admission, from April 15, 1953 to May 10, 1953. She was at this time 37 years old and said that she had gained 20 pounds since her last admission, from 70 to 90 pounds. She stated also that she had done extremely well until three weeks before this admission when she again had onset of

(Continued on Page 40)

INTERNAL MEDICINE

Chairman.....Edward Shapiro, M.D., Beverly Hills
Secretary.....Charles D. Armstrong, M.D., Menlo Park
Assistant Secretary.....Clifford B. Cherry, M.D., Los Angeles



EDWARD SHAPIRO
Chairman



CHARLES D. ARMSTRONG
Secretary

MONDAY, FEBRUARY 22

9:00—East Venetian Room

9:00—**Rubella Arthritis**—Philip R. Lee, M.D., Palo Alto.

Further observations on a disease of modest severity but frequent recurrence.

9:12—**Familial Nonhemolytic Jaundice with Conjugated Bilirubin**—Bernard J. Haverback, M.D., Los Angeles, and Samuel K. Wirtschafter, M.D., Los Angeles, by invitation. A third variety distinguished by conjugated bilirubin and normal liver biopsy.

9:24—**The Relative Sensitivity of Laboratory Tests in Diagnosis of Iron-Deficiency Anemia with Particular Reference to the Oral Fe⁵⁹ Appearance Test**—Gerald Belkin, M.D., U.S. Air Force, by invitation; and Irwin M. Weinstein, M.D., Los Angeles.

A particularly sensitive index of blood loss anemias.

9:36—**The Temperature of Venous Blood in the Extremities and Its Influence on the Blood Clotting Mechanism**—Edward Rubenstein, M.D., and Arthur Lack, M.D., San Mateo.

Experimental evidence that lowered temperature may account for some peripheral emboli.

9:48—**Determination of Cardiac Output with Radioactive Iodinated Human Serum Albumin—Clinical Value**—Donald V. Mahony, M.D., Fullerton; Balakrishna Hegde, M.D., by invitation, and Franz K. Bauer, M.D., Los Angeles.

A relatively simple procedure appropriate for use on the severely ill.

10:00—**Pitfalls in the Diagnosis and Management of Thyroid Disease**—Albert Segaloff, M.D., New Orleans, by invitation.

Dr. Segaloff is the Director of Endocrine Research, Alton Ochsner Medical Foundation in New Orleans, Louisiana.

10:30—**Business Meeting.**

10:36—**Chairman's Address: Renal Damage Caused by Penicillin in Subacute Bacterial Endocarditis—Its Recognition and Treatment**—Edward Shapiro, M.D., Beverly Hills.

Two instructive cases—eosinophilia, if present, is a diagnostic clue.

10:48—**Pyrogen Provocative Test in the Diagnosis of Pyelonephritis**—Yale J. Katz, M.D., by invitation, Los Angeles; George N. Herron, M.D., Los Angeles, by invitation; Robert I. Boyd, M.D., Pasadena; and Dixon Young, M.D., Los Angeles, by invitation.

Increase in pyuria after pyrogen injection may unmask latent disease.

11:00—**Studies of Growth Hormone Control of Fat and Carbohydrate Metabolism in Humans**—Josiah Brown, M.D., Los Angeles, by invitation.

Hormone augments the utilization of fatty acids for energy.

11:12—**Alpha Particle Irradiation of the Pituitary in Acromegalics**—Richard Carlson, M.D., Berkeley, by invitation; and Francesco Sangalli, M.D., Oakland.

Cyclotron exposure is of benefit in previously untreated patients.

11:24—**Tracheotomy for Acute Pulmonary Insufficiency Complicating Chronic Pulmonary Emphysema**—Lailee Backhtiar Tecimer, M.D., by invitation, and Morton Lee Pearce, M.D., Los Angeles.

A procedure of life-saving potential in the failing patient.

11:36—**Idiopathic Pulmonary Hemosiderosis—Report of Two Cases**—Maurice Yettra, M.D., Herman

Weiner, M.D., and Erwin D. Goldenberg, M.D., Los Angeles.

Details of a rare but important clinical syndrome.

11:48—**The Chloride Content of the Cerebrospinal Fluid**—Hyman W. Gierson, M.D., Los Angeles; and G. J. Owens, M.D., Milwaukee, Wisconsin, by invitation.

Reduced levels most evident in tuberculous or fungal meningitis.

QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION

- (a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association or A.M.A. membership card.)
- (b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. (A membership card of the Student American Medical Association or letter from their dean's office.)
- (c) Medical secretaries will be admitted upon presentation of a letter from the physician employer.
- (d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer.
- (e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), student nurses, x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification.
- (f) *All questions on admission will be passed upon by a member of the Committee on Registration who will be present at the desk.*

GENERAL SURGERY

Chairman.....William F. Pollock, M.D., Santa Monica
Secretary.....Philip R. Westdahl, M.D., San Francisco
Assistant Secretary.....William P. Mikkelsen, M.D., Los Angeles



WILLIAM F. POLLOCK
Chairman



PHILIP R. WESTDAHL
Secretary

SUNDAY, FEBRUARY 21

9:00—Colonial Room

9:00—Treatment of Thrombophlebitis—Howard B. Kirtland, Jr., M.D.; Roland G. Brown, M.D., San Diego; and Richard T. McDonald, M.D., by invitation, San Diego.

9:15—Postpartum Phlebectomy—Edward N. Snyder, Jr., M.D., and Martin H. Crumrine, M.D., Pasadena.

9:30—Surgical Aspects of the Adrenals—Victor Richards, M.D., San Francisco.

9:45—Salivary Gland Tumors—James T. Helsper, M.D., and George S. Sharp, M.D., Pasadena.

10:00—Nontoxic Nodular Goiter and Thyroid Therapy—Evolution of the Responsibilities of the Surgeon—Oliver Cope, M.D., Boston, by invitation.

10:30—Some Polyps I Have Known—Lauren V. Ackerman, M.D., St. Louis, by invitation.

11:00—Surgical Treatment of Malignant Melanoma—Arthur G. Michels, M.D., Los Angeles.

11:15—Present Status of the Prevention and Treatment of Intestinal Adhesions—John E. Connolly, M.D., San Francisco, and John W. Smith, M.D., by invitation, San Francisco.

11:30—The Significance of Elevated Serum Amylase Levels in Peptic Gastroduodenal Perforation—Frank A. Rogers, M.D., Whittier.

PRESIDENTS' DINNER DANCE

SUNDAY, FEBRUARY 21

Cocoanut Grove, Ambassador Hotel, 8:00 p.m.

Formal dress optional

Tickets will be on sale in the Main Lobby

GENERAL PRACTICE

Chairman.....James S. Eley, M.D., Eureka
Secretary.....Floyd K. Anderson, M.D., Los Angeles
Assistant Secretary.....A. J. Franzi, M.D., San Francisco



JAMES S. ELEY
Chairman



FLOYD K. ANDERSON
Secretary

The Section on General Practice will not conduct a scientific program in order not to conflict with the Postgraduate Courses, the General Meetings and the Joint Meeting of the Sections on General Practice, Obstetrics and Gynecology, Pediatrics and Public Health, which this section helped to arrange.

SUNDAY, MONDAY and TUESDAY MORNINGS FEBRUARY 21 to 23

Postgraduate Course in Endocrinology

University of Southern California School of Medicine
Co-sponsored by Section on General Practice

Sunday—Los Angeles County General Hospital
Buses will be provided and leave from Wilshire entrance,
Ambassador Hotel, at 8:00 a.m.

9:00 a.m.-12:30 p.m.—Clinical Case Demonstrations of Various Endocrine Abnormalities

Monday—Regency Room, Ambassador Hotel
9:00 a.m.-Noon—Menstrual Irregularities.
Thyroid Diseases.

Tuesday—Regency Room, Ambassador Hotel
9:00 a.m.-Noon—Endocrine Problems Common to Both Sexes.
For Curriculum, see pages 34 to 37.

12:00—Business Meeting and Election of Officers,
Section on General Practice.

SUNDAY, FEBRUARY 21

2:00—Embassy Room

General Meeting

Symposium on Parathyroid Diseases
For program, see page 10.

MONDAY, FEBRUARY 22

2:00—Embassy Room

General Meeting

Symposium on Management of Advanced
Malignant Disease
For program, see page 10.

TUESDAY, FEBRUARY 23

Noon—Regency Room

12:00—Business Meeting and Election of Officers.

TUESDAY, FEBRUARY 23

2:00—Embassy Room

2:00—
General Meeting and
Clinical-Pathological Conference

For program and case histories, see pages 11 to 13.

WEDNESDAY, FEBRUARY 24

2:00—West Venetian Room

Joint Meeting with Sections on Obstetrics and Gynecology,
Pediatrics and Public Health

Symposium on Maternal and Perinatal Mortality

Moderator: James W. Ravenscroft, M.D., San Diego
Chairman, C.M.A. Committee on Maternal and Child Care

1. Explanation of California State Department of Public Health Policies and Procedures including Assembly Bill No. 595 Relative to Investigative Studies—Theodore Montgomery, M.D., California State Department of Public Health, Berkeley.
2. Two Maternal Mortalities—A Panel Discussion.
Moderator: William Benbow Thompson, M.D., Los Angeles
3. Two Perinatal Mortalities—A Panel Discussion.
Moderator: Robert F. Chinnoch, M.D., Los Angeles

ALLERGY

Chairman.....George F. Harsh, M.D., San Diego
Secretary.....Hyman Miller, M.D., Beverly Hills
Assistant Secretary.....Gardner S. Stout, M.D., San Mateo



GEORGE F. HARSH
Chairman



HYMAN MILLER
Secretary

SUNDAY, FEBRUARY 21

9:00—Oval Room A

9:00—**ACTH—Useful in Therapy?**—Milan L. Brandon, M.D., San Diego, by invitation.
Discussion.

9:20—**Therapeutic Tests in Allergy—Their Feasibility and Limitations**—Milton M. Hartman, M.D., San Francisco.
Discussion.

9:40—**The Agar Plate Method in the Determination of Drug Sensitivity**—Van V. Chambers, M.D., Palo Alto.
Discussion.

10:00—**Nonreaginic Allergy—A Realistic Appraisal of Coca's Concept of Idioblapsis**—Granville F. Knight, M.D., Santa Barbara.
Discussion.

10:20—Recess.

10:30—**Hand Dermatitis Due to Food or Pollen Allergy**—E. James Young, M.D., and Albert H. Rowe, M.D., Oakland.
Discussion.

10:50—**Incidence of Sensitivity to Insect Protein Among Allergic and Nonallergic Individuals in an Urban Population**—Walter R. McLaren, M.D., Pasadena; D. Edward Frank,

M.D., Sun Valley; and Ben C. Eisenberg, M.D., Huntington Park.

Discussion.

11:10—**The Significance of Infection in the Diagnosis and Management of Allergic Disease**—Ralph Bookman, M.D., Beverly Hills; and Richard S. Shapiro, M.D., by invitation, Beverly Hills.
Discussion.

11:30—**Chairman's Address: Liver Function Tests and Serum Vitamin C Levels in Acute and Chronic Urticaria and in Other Allergies**—George F. Harsh, M.D., San Diego.

12:00—Recess.

12:30—Oval Room A

12:30—**Luncheon and Business Meeting**—Sponsored jointly by the Section on Allergy and the California Society of Allergy.

7:00—Lido Room

7:00—**Reception before Presidents' Dinner Dance at 8 p.m. in Cocoanut Grove.** Reception sponsored jointly by the Section on Allergy and the California Society of Allergy.

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

ANESTHESIOLOGY

Chairman..... Charles D. Anderson, M.D., Oakland
Secretary..... Roger W. Ridley, M.D., Riverside
Assistant Secretary..... Gilbert E. Kinyon, M.D., La Jolla



CHARLES D. ANDERSON
Chairman



ROGER W. RIDLEY
Secretary

WEDNESDAY, FEBRUARY 24

2:00—Regency Room

2:00—Clinical Experience with Fluo-ether Anesthesia—Robert W. Bethune, M.D., Los Angeles, by invitation; and Henry V. Upholt, Jr., M.D., Gardena.

This azeotrope has been in use for over a year. The complications of hypotension and bradycardia are less frequent and less profound than those occurring with Fluothane. Also fluo-ether appears to provide adequate anesthesia.

Discussion.

2:30—Hepatotoxic Effects of Fluothane—Paul H. Lorhan, M.D., Torrance, by invitation.

Methods of measuring the hepatic effect of Fluothane are presented. The results of these measurements are discussed.

Discussion.

3:00—Qualifications of an Anesthesiologist for Group Practice—Gilbert Kinyon, M.D., San Diego.

The advantages and disadvantages of practicing anesthesiology in a group are discussed. To be successful in group practice, an anesthesiologist must prepare himself to meet the requirements and problems of this type of practice.

Discussion.

3:40—Cardiac Arrest Outside the Operating Room
—Donald C. Schlotter, M.D., and Richard W. Gentry, M.D., Riverside.

Cardiac arrest occurred in two patients after they were admitted to the emergency room. The presence of adequate facilities and personnel made possible the resuscitation of both patients without demonstrable cerebral sequelae.

Discussion.

4:10—Business Meeting and Election of Officers.

4:45—Annual Meeting of the California Society of Anesthesiologists.

BRING PROPER IDENTIFICATION FOR REGISTRATION

DERMATOLOGY AND SYPHILOLOGY

Chairman.....Anker K. Jensen, M.D., Los Angeles
Secretary.....Edward L. Laden, M.D., Inglewood
Assistant Secretary.....Paul M. Crossland, M.D., Santa Rosa



ANKER K. JENSEN
Chairman



EDWARD L. LADEN
Secretary

SUNDAY, FEBRUARY 21

9:00—Grove Lounge

9:00—Chairman's Address: A Practical Approach for the Office Treatment of Skin Cancer—Anker K. Jensen, M.D., Los Angeles.

9:20—The Treatment of Onychomycosis of the Feet with Griseofulvin—Ronald M. Reisner, M.D., by invitation; Richard S. Homer, M.D., Victor D. Newcomer, M.D., and Thomas H. Sternberg, M.D., Los Angeles.

9:40—Steroids in Dermatology—Robert G. Walton, M.D., Modesto.

10:00—Eosinophilic Granuloma of the Skin, Bone and Mucous Membrane—Francis J. Sullivan, M.D., by invitation; and John H. Epstein, M.D., San Francisco.

10:20—The Electron Beam in the Treatment of Mycosis Fungoides—Harold M. Schneidman, M.D., San Francisco.

10:40—Recess.

11:00—Symposium

Psychocutaneous Medicine

Moderator: Maximilian E. Obermayer, M.D., Los Angeles

11:00—Psychophysiology of the Skin—Edward J. Stainbrook, M.D., Los Angeles.

11:20—Self-Inflicted Lesions—Maximilian E. Obermayer, M.D., Los Angeles.

11:40—Discussion—Maximilian E. Obermayer, M.D., Los Angeles, Moderator.

11:50—Business Meeting and Election of Officers.

REGISTRATION

Registration and information desks are located in the Ballroom Foyer, Casino Floor. All members, guests, and visitors are requested to register immediately on arrival. There is no charge for registration except for Post-graduate Courses. Registration desks are open Saturday through Wednesday. Admission to the general and section sessions and exhibit areas is by badge only.

EAR, NOSE AND THROAT

Chairman.....Ewing Seligman, M.D., Beverly Hills
Secretary.....Heinrich W. Kohlmoos, M.D., Oakland
Assistant Secretary.....Marvin W. Simmons, M.D., Fresno



EWING SELIGMAN
Chairman



HEINRICH W. KOHLMOOS
Secretary

MONDAY, FEBRUARY 22

9:00—Grove Lounge

| | |
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| 9:00—The Diagnosis of Deafness in the Pre-School Child—George W. Olson, M.D., Fresno. Discussion. | 10:30—Tracheotomy in the Newborn—Chester M. Weseman, M.D., Berkeley. Discussion. |
| 9:30—Intravenous Fluids in Tonsillectomy—Fordyce Johnson, M.D., Pasadena. Discussion. | 11:00—Fatal Epistaxis—Francis Berchmans Quinn, Jr., M.D., Los Angeles. Discussion. |
| 10:00—Tympanoplasty—George T. Hodges, M.D., Newport Beach. Discussion. | 11:30—The Dry Nose and Postnasal Drip—William Baxter, M.D., Los Altos. Discussion. |
| | 12:00—Business Meeting and Election of Officers. |

PRESIDENTS' DINNER DANCE

SUNDAY, FEBRUARY 21

Cocoanut Grove, Ambassador Hotel, 8:00 p.m.

Formal dress optional

Tickets will be on sale in the Main Lobby

EYE

Chairman.....A. Ray Irvine, M.D., Los Angeles
Secretary.....Earle H. McBain, M.D., San Rafael
Assistant Secretary.....Floyd M. Bond, M.D., San Diego



A. RAY IRVINE
Chairman



EARLE H. McBAIN
Secretary

MONDAY, FEBRUARY 22

2:00—Regency Room

2:00—The Ophthalmologist's Role in Contact Lens Prescription—Richard A. Westsmith, M.D., San Mateo.
Discussion.

2:30—Recent Technical Advances in Contact Lenses—James F. Kleckner, M.D., Los Angeles.
Discussion.

3:00—Contact Lenses in Unusual Cases—J. Myron Middleton, M.D., Beverly Hills.
Discussion.

3:30—Sensory Deprivation on an Eye Service: Its Significance and Management—William J. Filante, M.D., Los Angeles; Jack L. Goldberg, M.D., and Harold W. Jones, M.D., Los Angeles, by invitation; and Eugene Ziskind, M.D., Los Angeles.
Discussion.

4:00—Business Meeting and Election of Officers.
6:00—Business Meeting and Election of Officers.

EMERGENCY CALLS AND MESSAGES

Each physician should notify his own secretary regarding the exact section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will attempt to transmit messages to the individual physician.

In case of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the Los Angeles County Medical Association, HUbbard 3-1581.

INDUSTRIAL MEDICINE AND SURGERY

Chairman.....Gandolph A. Prisinzano, M.D., Sacramento
Secretary.....Robert C. Rossberg, M.D., Los Angeles
Assistant Secretary.....John H. Leimbach, Jr., M.D., San Francisco



GANDOLPH A. PRISINZANO
Chairman



ROBERT C. ROSSBERG
Secretary

SUNDAY, FEBRUARY 21

9:00—Lido Room

9:00—Suggestions for Decreasing the Malpractice Potential of Industrial Practice—Henry Kappeler, Attorney at Law, Los Angeles, by invitation.
Discussion.

9:25—Industrial Visual Screening—Advantages and Disadvantages of Various Instruments—Byron H. Demorest, M.D., Sacramento, and John A. Berg, M.D., Sacramento.
Discussion.

9:50—Diagnosis and Initial Treatment of Chest Injuries—R. Reed Austin, M.D., Los Angeles.
Discussion.

10:15—Basic Radiological Procedures and Interpretation of the Initial Industrial Bone Injuries—Samuel Finck, M.D., Los Angeles.
Discussion.

10:40—Recess.

10:50—Diagnosis and Initial Treatment of the Traumatic Abdomen—W. Castleberry Custer, M.D., Los Angeles.
Discussion.

11:15—Twisted Omentum Resembling Acute Abdomen of Industrial Origin—Reuben Weingarten, M.D., Los Angeles.
Discussion.

11:40—Plastic Surgery Problems Applied to Industrial Medicine—Salvador Castanares, M.D., Los Angeles.
Discussion.

12:00—Business Meeting.

SUNDAY, FEBRUARY 21

2:00—Lido Room

Joint Meeting with the Section on Physical Medicine
Chairman: Gandolph A. Prisinzano, M.D., Sacramento

Panel Discussion

Diagnosis and Treatment of Soft Tissue Injuries of the Knee, Ankle, and Foot

Moderator: Willis Jacobus, M.D., Los Angeles

2:00—Review of Anatomy of the Knee, Ankle and Foot—Charles O. Bechtol, M.D., Los Angeles.

2:20—Soft Tissue Injuries of the Knee—A. A. Mason, M.D., Los Angeles.

2:40—Soft Tissue Injuries of the Ankle and Foot—Christopher Mason, M.D., Los Angeles.

3:00—Physical Medicine Treatment Techniques for Injuries of the Knee, Ankle, and Foot—David Rubin, M.D., Los Angeles.

3:20—Round Table Discussion.

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

OBSTETRICS AND GYNECOLOGY

Chairman.....Donald R. Nelson, M.D., San Francisco
Secretary.....John C. McDermott, M.D., Los Angeles
Assistant Secretary.....Edward F. Healey, M.D., San Rafael



DONALD R. NELSON
Chairman



JOHN C. McDERMOTT
Secretary

MONDAY, FEBRUARY 22

9:00—West Venetian Room

9:00—Sexual Problems Presented to the Gynecologist—Robert H. Fagan, M.D., Los Angeles.

9:30—Vaginal Anatomy Studies with Gel Molds—Kenneth F. Morgan, Jr., M.D., Los Angeles.

10:00—Backache in Pregnancy—Robert M. Jameson, M.D., San Francisco.

10:30—Recess.

10:45—Cancer and Pregnancy—J. R. Betson, Jr., M.D., by invitation, Albuquerque, New Mexico.

11:15—Chairman's Address—Donald R. Nelson, M.D., San Francisco.

11:45—Business Meeting.

WEDNESDAY, FEBRUARY 24

2:00—West Venetian Room

Joint Meeting with the Sections on General Practice, Pediatrics and Public Health

Symposium

Maternal and Perinatal Mortality

Moderator: James W. Ravenscroft, M.D., San Diego
Chairman, C.M.A. Committee on Maternal and Child Care

1. Explanation of California State Department of Public Health Policies and Procedures Including Assembly Bill No. 595 Relative to Investigative Studies—Theodore Montgomery, M.D., California State Department of Public Health, Berkeley.
2. Two Maternal Mortalities—A Panel Discussion.
Moderator: William Benbow Thompson, M.D., Los Angeles
3. Two Perinatal Mortalities—A Panel Discussion.
Moderator: Robert F. Chinnock, M.D., Los Angeles

EMERGENCY CALLS AND MESSAGES

Each physician should notify his own secretary regarding the exact section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will attempt to transmit messages to the individual physician.

In case of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the Los Angeles County Medical Association, HUbbard 3-1581.

ORTHOPEDICS

Chairman.....Howard A. Mendelsohn, M.D., Beverly Hills
Secretary.....Carl E. Horn, M.D., Sacramento
Assistant Secretary.....Bret W. Smart, M.D., Oakland



HOWARD A. MENDELSONH
Chairman



CARL E. HORN
Secretary

SUNDAY, FEBRUARY 21

9:00—Regency Room

9:00—Fracture Separation of the Lower Humeral Epiphysis—Leonard Marmor, M.D., and Charles O. Bechtol, M.D., Los Angeles.
Discussion: Four minutes.

9:30—The Surgical Treatment of Tri-Malleolar Fractures of the Ankle—Alonzo J. Neufeld, M.D., Los Angeles.
Discussion: Four minutes.

10:00—Unusual Manifestation of Primary Osteomyelitis in Children—Robert A. Horstman, M.D., Los Angeles.
Discussion: Four minutes.

10:30—Intermission.

10:40—Painful Feet—Robert P. Watkins, M.D., San Francisco.
Discussion: Four minutes.

11:10—Medical Problems in the Amputee—Verne T. Inman, M.D., San Francisco.
Discussion: Four minutes.

11:40—Chairman's Address—Howard A. Mendelsohn, M.D., Los Angeles.

12:10—Recess.

12:30—Regency Room

12:30—Luncheon.

1:00—Business Meeting and Election of Officers.

PRESIDENTS' DINNER DANCE

SUNDAY, FEBRUARY 21

Cocoanut Grove, Ambassador Hotel, 8:00 p.m.

Formal dress optional

Tickets will be on sale in the Main Lobby

PATHOLOGY AND BACTERIOLOGY

Chairman.....Leo Kaplan, M.D., Los Angeles
Secretary.....Robert L. Dennis, M.D., San Jose
Assistant Secretary.....George J. Hummer, M.D., Santa Monica



LEO KAPLAN
Chairman



ROBERT L. DENNIS
Secretary

SUNDAY, FEBRUARY 21

9:00—East Venetian Room

This program will emphasize
Pediatric Pathology

9:00—Electron Microscopic Studies of Renal Pathology—Harrison Latta, M.D., Los Angeles, by invitation.

9:25—Studies on the Pathogenicity of Group A Hemolytic Streptococci—Wm. Barry Wood, Jr., M.D., Baltimore, by invitation.

9:55—Atresia and Stenosis of the Intestine in the Newborn Associated with Fibrocystic Disease of the Pancreas—Robert S. Cleland, M.D., Los Angeles.

10:15—Idiopathic Pulmonary Hemosiderosis—John Powers, M.D., by invitation, and Jackson T. Crane, M.D., San Francisco; and Derman Hammond, M.D., Los Angeles, by invitation.

10:35—Recess.

10:45—Uses and Abuses of Corticosteroids in Children—Albert Segaloff, M.D., New Orleans, by invitation.

11:15—The Anatomy of Leukemia—Daniel Stowens, M.D., Los Angeles.

11:35—Cytomegalic Cell Disease of Liver—Hugh A. Edmondson, M.D., Los Angeles.

11:55—Chairman's Address: Diagnostic Cytopathology of the Uterine Cervix, Using Acridine-Orange Fluorochrome: A Study of 4,000 Patients—Leo Kaplan, M.D., Los Angeles; Marianna Masin, M.D., by invitation; and Francis Masin, M.D., by invitation, Los Angeles.

12:30—Business Meeting.

PRESIDENTS' DINNER DANCE

SUNDAY, FEBRUARY 21

Cocoanut Grove, Ambassador Hotel, 8:00 p.m.

Formal dress optional

Tickets will be on sale in the Main Lobby

PEDIATRICS

Chairman.....Gordon L. Richardson, M.D., North Hollywood
Secretary.....James L. Dennis, M.D., Oakland
Assistant Secretary.....Harry O. Ryan, M.D., Pasadena



GORDON L. RICHARDSON
Chairman



JAMES L. DENNIS
Secretary

SUNDAY, FEBRUARY 21

9:00—East Venetian Room

Pediatric Pathology

The Section on Pathology and Bacteriology has arranged a meeting emphasizing Pediatric Pathology. For program, see page 26.

WEDNESDAY, FEBRUARY 24

9:00—West Venetian Room

9:00—Head Injuries in Children—Robert Pudenz, M.D., Pasadena.

9:30—The Electroencephalogram—Its Indications and Limitations—Merl Carson, M.D., Los Angeles.

10:00—Cerebral Palsy—Early Diagnosis and Treatment—Margaret Jones, M.D., Los Angeles.

10:30—Recess.

10:45—The Child Who Does Not Talk—Edward Senz, M.D., Berkeley.

11:15—Rehabilitation of the Neurologically Handicapped Child—Gordon Williams, M.D., Palo Alto.

11:45—Business Meeting.

WEDNESDAY, FEBRUARY 24

2:00—West Venetian Room

Joint Meeting with the Sections on General Practice, Obstetrics and Gynecology, and Public Health

Symposium

Maternal and Perinatal Mortality

Moderator: James W. Ravenscroft, M.D., San Diego
Chairman, C.M.A. Committee on Maternal and Child Care

1. Explanation of California State Department of Public Health Policies and Procedures Including Assembly Bill No. 595 Relative to Investigative Studies—Theodore Montgomery, M.D., California State Department of Public Health, Berkeley.

2. Two Maternal Mortalities—A Panel Discussion.
Moderator: William Benbow Thompson, M.D., Los Angeles

3. Two Perinatal Mortalities—A Panel Discussion.
Moderator: Robert F. Chinnock, M.D., Los Angeles

BRING PROPER IDENTIFICATION FOR REGISTRATION

PHYSICAL MEDICINE

Chairman.....Carrie E. Chapman, M.D., Oakland
Secretary.....Joseph E. Maschmeyer, M.D., Los Angeles
Assistant Secretary.....S. Malvern Dorinson, M.D., San Francisco



CARRIE E. CHAPMAN
Chairman



JOSEPH E. MASCHMEYER
Secretary

SUNDAY, FEBRUARY 21

2:00—Lido Room

Joint Meeting with the Section on Industrial Medicine and Surgery

Chairman: Gandalph A. Prisinzano, M.D.
Sacramento

Panel Discussion

Diagnosis and Treatment of Soft Tissue Injuries of the Knee, Ankle and Foot

Moderator: Willis Jacobus, M.D., Los Angeles

2:00—Review of Anatomy of the Knee, Ankle and Foot—Charles O. Bechtol, M.D., Los Angeles.

2:20—Soft Tissue Injuries of the Knee—A. A. Mason, M.D., Los Angeles.

2:40—Soft Tissue Injuries of the Ankle and Foot—Christopher Mason, M.D., Los Angeles.

3:00—Physical Medicine Treatment Techniques for Injuries of the Knee, Ankle and Foot—David Rubin, M.D., Los Angeles.

3:20—Round Table Discussion.

MONDAY, FEBRUARY 22

9:00—Lido Room

9:00—Introduction—Carrie E. Chapman, M.D., Oakland, Chairman.

Panel Discussion

Present Day Management of Rheumatoid Arthritis

9:10—Current Therapy and Medical Management of the Patient with Rheumatoid Arthritis—Albert J. Josselson, M.D., Alhambra.

9:35—Present Day Physical Therapy for the Rheumatoid Arthritis Patient—Frances Baker, M.D., San Mateo.

9:50—Present Day Occupational Therapy for the Rheumatoid Arthritis Patient—Elizabeth S. Austin, M.D., Los Angeles.

10:05—Recent Developments in Surgery and Orthotics for the Rheumatoid Arthritis Patient—Vernon L. Nickel, M.D., Los Angeles; Alice L. Garrett, M.D., Downey, by invitation.

10:25—Round Table Discussion and Question Period.
Moderator: Fred B. Moor, M.D., Los Angeles

11:00—Business Meeting and Election of Officers.

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

PSYCHIATRY AND NEUROLOGY

Chairman.....John D. Moriarty, M.D., Los Angeles
Secretary.....Leon J. Whitsell, M.D., San Francisco
Assistant Secretary.....Robert E. Wyers, M.D., Norwalk



JOHN D. MORIARTY
Chairman



LEON J. WHITSELL
Secretary

WEDNESDAY, FEBRUARY 24

9:00—Regency Room Neurology

9:00—Clinical Manifestations on Basal Artery Insufficiency—William W. Anderson, M.D., San Francisco.
Discussion.

9:30—Vertigo as a Presenting Complaint: An Analysis of 400 Consecutive Cases—Donald Macrae, M.D., San Francisco.
Discussion.

10:00—Muscle Spindle Activity in Parkinsonism—William W. Hofmann, M.D., Palo Alto, by invitation.
Discussion.

10:15—Occlusion of the Middle Cerebral Artery in Children—Burton L. Wise, M.D., San Francisco.
Discussion.

10:45—The Medical-Educational Evaluation of the Language-Handicapped Child—William J. Wedell, M.D., San Francisco.
Discussion.

11:15—Further Studies of Electroencephalographic Changes and Other Neurophysical Changes in Altitude Chamber Experiments—George N. Thompson, M.D., Los Angeles.
Discussion.

11:45—Business Meeting.

WEDNESDAY, FEBRUARY 24

2:00—East Venetian Room Psychiatry

2:00—Teaching Psychiatry to General Practitioners—Allen J. Enelow, M.D., Los Angeles.
Discussant: Richard H. Gwartney, M.D., San Bernardino.

2:25—Chairman's Address: Problems in Communication for the Psychiatrist—John D. Moriarty, M.D., Los Angeles.

2:50—Impressions of Soviet Psychiatry—George J. Wayne, M.D., Los Angeles.
Discussant: Eugené Ziskind, M.D., Los Angeles.

3:20—An Evaluation of the Effectiveness of Isocarboxazid, a New Iproniazid Analogue (Marplan) in Depressive Syndrome—Theodore Rothman, M.D., Beverly Hills; Harry M. Grayson, Ph.D., by invitation; and James T. Ferguson, M.D., Los Angeles.
Discussant: Keith S. Ditman, M.D., Los Angeles.

3:45—Wanted: A Biochemical Test for Schizophrenia—Ronald R. Koegler, M.D., Los Angeles; Edward G. Colbert, M.D., Los Angeles; and Samuel Eiduson, Ph.D., by invitation, Los Angeles.
Discussant: Allen J. Enelow, M.D., Los Angeles.

4:10—Precipitating Cause of Hospitalization of the Geriatric State Hospital Inpatient—Daniel A. Grabski, M.D., Norwalk.
Discussant: O. L. Gericke, M.D., San Bernardino.

4:30—Follow-up Study of Epileptics Who Receive Group Psychotherapy—Charles Yeager, M.D., Donald A. Shaskan, M.D., by invitation; and Francis J. Rigney, M.D., San Francisco.
Discussant: Esther Somerfeld-Ziskind, M.D., Los Angeles.

PUBLIC HEALTH

Chairman.....Carolyn B. Albrecht, M.D., San Rafael
Secretary.....Merle E. Cosand, M.D., San Bernardino
Assistant Secretary.....Ellis D. Sox, M.D., San Francisco



CAROLYN B. ALBRECHT
Chairman



MERLE E. COSAND
Secretary

WEDNESDAY, FEBRUARY 24

9:00—East Venetian Room

9:00—A Program for the Stimulation of Research in Local Health Agencies—Robert Dyar, M.D., Berkeley.

Discussion.

9:30—Control of Antibiotic Resistant Hospital Infections—Edward Lee Russell, M.D., Santa Ana.

Discussion.

10:00—Recess.

10:15—The Practicing Physician and Public Health Agencies' Responsibility in Venereal Disease—Richard A. Koch, M.D., San Francisco.

Discussion.

10:45—Viral Central Nervous System Disease—Edwin H. Lennette, M.D.; Robert L. Magoffin, M.D., by invitation; Nathalie J. Schmidt, Ph.D., by invitation; and Arthur C. Hollister, Jr., M.D., Berkeley.

Discussion.

11:45—Business Meeting.

WEDNESDAY, FEBRUARY 24

2:00—West Venetian Room

Joint Meeting with the Sections on General Practice, Obstetrics and Gynecology, and Pediatrics

Symposium

Maternal and Perinatal Mortality

Moderator: James W. Ravenscroft, M.D., San Diego
Chairman, C.M.A. Committee on Maternal and Child Care

1. Explanation of California State Department of Public Health Policies and Procedures Including Assembly Bill No. 595 Relative to Investigative Studies—Theodore Montgomery, M.D., California State Department of Public Health, Berkeley.

2. Two Maternal Mortalities—A Panel Discussion.
Moderator: William Benbow Thompson, M.D., Los Angeles

3. Two Perinatal Mortalities—A Panel Discussion.
Moderator: Robert F. Chinnock, M.D., Los Angeles

BRING PROPER IDENTIFICATION FOR REGISTRATION

RADIOLOGY

Chairman William H. Graham, M.D., San Jose
Secretary Frank C. Binkley, M.D., Pasadena
Assistant Secretary John R. Bryan, M.D., San Francisco



WILLIAM H. GRAHAM
Chairman



FRANK C. BINKLEY
Secretary

SUNDAY, FEBRUARY 21

9:00—West Venetian Room

Diagnostic Radiology

9:00—Iatrogenic Perforation of the Esophagus—John H. Heald, M.D., San Francisco.

Discussion.

9:25—Correlation of Gastroscopic and Radiographic Findings—Walter L. Stilson, M.D., and Erling S. Tobiassen, M.D., Los Angeles.

Discussion.

9:50—Radiological Detection and Identification of Coronary Heart Disease—Bernard J. O'Loughlin, M.D., Los Angeles.

Discussion.

10:15—Recess.

10:25—Pelvic Pneumography—A Useful Adjunct to Clinical Examination—G. Melvin Stevens, M.D., Richard S. Lee, M.D., and John F. Weigen, M.D., Palo Alto.

Discussion.

10:50—Infections of the Intervertebral Disc—Robert B. Engle, M.D., Pasadena.

Discussion.

11:15—Roentgenographic Variations of Paget's Disease—Howard L. Steinbach, M.D., San Francisco.

Discussion.

11:40—Middle-Lobe Syndrome—Stefan P. Wilk, M.D., Los Angeles.

Discussion.

12:05—Business Meeting and Election of Officers.

SUNDAY, FEBRUARY 21

4:00—West Venetian Room

Therapeutic Radiology

4:00—Nonsurgical Treatment of Primary Carcinoma of the Breast in Elderly Women—Robert J. McKenna, M.D., by invitation, and Ian Macdonald, M.D., Los Angeles.

Discussion.

4:25—Five-Year Results of Intracavitary Cobalt⁶⁰ Therapy in Nasopharyngeal Cancer—Jerome M. Vaeth, M.D., by invitation; and Franz J. Buschke, M.D., San Francisco.

Discussion.

4:50—Recess—Annual Meeting of Pacific Roentgen Society.

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

UROLOGY

Chairman.....Earl F. Nation, M.D., Pasadena
Secretary.....Morrell E. Vecki, M.D., San Francisco
Assistant Secretary.....Sam Peck, M.D., San Diego



EARL F. NATION
Chairman



MORRELL E. VECKI
Secretary

WEDNESDAY, FEBRUARY 24

9:00—Grove Lounge

9:00—Management of Penoscrotal Fistula and/or Diverticula—A. Estin Comarr, M.D., Long Beach.
Discussion by Harold G. Kudish, M.D., Beverly Hills.

9:30—A Rare Angiomyolipoma, Simulating Renal Tumor—Robert T. Plumb, M.D., San Diego, and James P. Felder, M.D., San Diego, by invitation.

10:00—Experience in Bladder Substitutes in Malignancy—Carl E. Ebert, M.D., Los Angeles.
Discussion by B. Lyman Stewart, M.D., Los Angeles.

10:30—Use of the Double Balloon Hemostatic Catheter in Prostatic Surgery—R. O. Pearman, M.D., San Luis Obispo.
Discussion by Miles Griffin, M.D., Oakland.

11:00—Contrast Cystography Following Transurethral Resection of Bladder Tumor—Henry Bodner, M.D., Van Nuys.
Discussion by Roger W. Barnes, M.D., Los Angeles.

11:30—Urological Diagnosis by Cineradiography—Roderick D. Turner, M.D., Los Angeles.
Discussion by Henry Bodner, M.D., Van Nuys.

WEDNESDAY, FEBRUARY 24

2:00—Grove Lounge

2:00—Torsion of the Testicle in the New-Born—Norman M. Nelson, M.D., Covina.
Discussion by Everett D. Hendricks, M.D., Pasadena.

2:30—Kidney Function Tests in Children—Chester C. Winter, M.D., Los Angeles.
Discussion by Richards P. Lyon, M.D., Berkeley.

3:00—Retropubic Excision of Urethral Diverticulum in a Female—John A. Arcadi, M.D., Whittier.
Discussion by Milo Ellik, M.D., Long Beach.

3:30—Prevention and Management of Recurrent Urinary Calculi—Julius H. Winer, M.D., Beverly Hills.
Discussion by James S. Elliot, M.D., Berkeley.

4:00—Chairman's Address—Earl F. Nation, Pasadena.

4:15—Business Meeting and Election of Officers.

VISIT SCIENTIFIC AND TECHNICAL EXHIBITS

MOTION PICTURE PROGRAM

PAUL D. FOSTER, M.D., Chairman

Sunday to Wednesday, February 21 to 24

COLONIAL ROOM, AMBASSADOR HOTEL

Motion Picture Film Symposiums will be offered daily in the Colonial Room, Ambassador Hotel. Each Symposium will have a Moderator and Panel of experts in the field (authors in many cases) to discuss films and answer questions from the audience. Following is a partial and tentative list of films which will be shown on the programs. A separate Motion Picture program with complete listing and description of films will be available at the time of the meeting.

SUNDAY, 2:00 P.M.

Surgery

Moderator: William P. Longmire, Jr., Los Angeles.
Removal of Left Ventricular Cavity Tumors.
Other films to be announced.

MONDAY, 9:00 A.M.

Emergencies in Practice

Moderator: Francis E. West, San Diego.
Panel: Bertrand Meyer and John Dillon, Los Angeles.
Rescue Breathing.
Just 4 Minutes (Team Approach to Cardiac Arrest).
Treatment of Open Fractures.
Cardiac Arrest.
Emergency Surgery of the Acutely Injured.

MONDAY, 2:00 P.M.

Anesthesiology

Moderator: Roger W. Ridley, Riverside.
Panel: Forrest Leffingwell and Emma Kittredge (Quinn), Los Angeles.
Premedication in Pediatric Surgery.
Fire and Explosive Hazards from Flammable Anesthetics.
Pediatric Anesthesiology.
Intravenous Anesthesia with Barbiturates.

MONDAY, 8:00 P.M.

Medical-Legal Symposium

Moderator: Mr. Frederick Field, Los Angeles.
Panel: Arthur A. Kirchner and Mr. James Ludlam, Los Angeles.
A Matter of Fact—American Medical Association and American Bar Association.
Other films to be announced.

TUESDAY, 9:00 A.M.

Pediatrics

Moderator: Ralph Netley, Pasadena.
Panel: Robert F. Chinnock, Los Angeles; Mary Olney, San Francisco, and Charles M. Stewart, Los Angeles.

Physical Examination of the Newborn.
Congenital Bladder Neck Obstruction.
Duodenal Obstruction in Infancy.
Hernias in Infants and Children.

TUESDAY, 3:45 P.M.

Diseases and Management of Problems of the Aged

Moderator: George Griffith, Los Angeles.
Panel: JoAnn Taylor, Glendale; Angus McDonald, Los Angeles, and Frank Norman, Santa Rosa.
Rehabilitation Adds Life to Years.
Cerebral-Vascular Diseases: The Challenge of Management.

TUESDAY, 8:00 P.M.

Staphylococcus Infection

Moderator: Wm. Barry Wood, Baltimore, Maryland.
Panel: Lowell A. Rantz, Palo Alto; J. Norman O'Neill and Sister Liguori, Queen of Angels Hospital, Los Angeles.
Staphylococcal Infection in Surgery.
Hospital Sepsis—A Communicable Disease.
Prevention and Control of Staphylococcal Infections.

WEDNESDAY, 9:00-11:00 A.M.

Symposium on Acute Abdomen

Symposium to be announced.

WEDNESDAY, 11:00-12:00

Diagnosis and Treatment of Depressions and the Emotionally Disturbed

Moderator: Frank F. Tallman, Los Angeles.
Panel: Cyril B. Courville and Edward J. Stainbrook, Los Angeles.
Diagnosis and Treatment of Depressions in General Practice.
Other films to be announced.

WEDNESDAY, 2:00 P.M.

Diagnostic and Therapeutic Features of Cancer

Moderator: Justin Stein, Los Angeles.
Panel: Ian Macdonald and Robert Brown, Los Angeles.
Routine Pelvic Examination and Cytologic Method.
Benign and Malignant Tumors of the Larynx.
Combined Abdominoperineal Operation of Miles for Carcinoma of the Lower Rectum.
Exploration of Pancreas for Islet Cell Tumor.
Head and Neck Cancer.

POSTGRADUATE COURSES

Presented by the California Medical Association in cooperation with the College of Medical Evangelists, the University of California at Los Angeles, and the University of Southern California

FEE: \$25.00 for each course*

Out-of-State Faculty—Guests of the California Medical Association:

OLIVER COPE, M.D., Associate Professor of Surgery, Harvard Medical School, Massachusetts General Hospital, Boston, Massachusetts.

ALBERT SEGALOFF, M.D., Director, Division of Endocrinology, Alton Ochsner Medical Foundation, New Orleans, Louisiana.

WM. BARRY WOOD, JR., M.D., Professor of Microbiology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

1. MINOR SURGERY IN THE OFFICE

Sunday, Monday and Tuesday Mornings, February 21, 22, 23

White Memorial Hospital, 1700 Brooklyn Avenue, Los Angeles

Program planned by the College of Medical Evangelists—**G. E. Norwood, M.D.**, Assistant Dean and Chairman, Division of Postgraduate Medicine.

Course Chairman: Arthur I. Kugel, M.D.

Featuring: Closed Circuit Television.

Time: Sunday, Monday and Tuesday, February 21, 22 and 23, 9:00 a.m. to 12:00 noon.

Fee: \$25.00.

8:00 a.m. daily—Chartered bus leaves Wilshire entrance of Ambassador Hotel to go to White Memorial Hospital.

Instructional Staff:

California Medical Association Guest:

Oliver Cope, M.D., Associate Professor of Surgery, Harvard Medical School, Massachusetts General Hospital, Boston, Massachusetts.

College of Medical Evangelists:

Molleurus Couperus, M.D., Associate Clinical Professor of Dermatology and Syphilology.

Howard S. Downs, M.D., Associate Professor of Anesthesiology.

Samuel H. Fritz, M.D., Assistant Professor of Surgery.

Wilmer C. Hansen, M.D., Assistant Clinical Professor of Surgery.

Malcolm R. Hill, Sr., M.D., Professor of Proctology.

J. Arthur Johnson, M.D., Instructor in Obstetrics and Gynecology.

Arthur I. Kugel, M.D., Associate Professor of Surgery.

Forrest E. Leffingwell, M.D., Professor of Anesthesiology.

Alonzo J. Neufeld, M.D., Professor of Orthopedic Surgery.

Albert L. Olson, M.D., Assistant Professor of Pathology.

Kathleen M. Schaefer, M.D., Assistant Professor of Anesthesiology.

William A. Scharffenberg, Jr., M.D., Assistant Professor of Orthopedic Surgery.

Clarence E. Stafford, M.D., Professor of Surgery.

SUNDAY, FEBRUARY 21

8:00 a.m. daily—Chartered bus leaves Wilshire entrance of Ambassador Hotel to go to White Memorial Hospital.

Chairman of the Day: Alonzo J. Neufeld, M.D.

9:00—Problems in Obtaining and Handling Suitable Pathologic Material—Presentation will be illustrated and will include a discussion of: (1) Types of fixatives, (2) What is an adequate biopsy?, (3) Importance of gentle handling, (4) Importance of history and (5) Cytologic preparation—Albert L. Olson, M.D., and Associates.

9:30—Local Anesthetic Agents—An illustrated presentation that will include a discussion of relative effectiveness, prevention of dangerous reactions and how and where to effectively locally anesthetize—Forrest E. Leffingwell, M.D., Howard S. Downs, M.D., and Kathleen M. Schaefer, M.D.

Panel Discussion

10:30—Foreign Bodies: Their Diagnosis, Localization and Removal.

Moderator: Alonzo J. Neufeld, M.D.

Participants: Departments of Orthopedic Surgery, General Surgery, Otolaryngology, Ophthalmology, Urology and Radiology.

11:30—A Panel Interview of Discussants of the Day with Questions and Answers—Arthur I. Kugel, M.D., Moderator.

*Interns and Residents with proper identification will be registered without payment of the fee.

MONDAY, FEBRUARY 22

8:00 a.m. daily—Chartered bus leaves Wilshire entrance of Ambassador Hotel to go to White Memorial Hospital.

Chairman of the Day: Malcolm R. Hill, Sr., M.D.

9:00—Television: Demonstration of Office Surgical Procedures in Dermatology—Molleurus Couperus, M.D., and Associates.

9:45—Television: Demonstration of Office Surgical Procedures in Proctology—Malcolm R. Hill, Sr., M.D., and Associates.

10:30—Television: Local Infiltrations as a Therapeutic Measure—William A. Scharffenberg, Jr., M.D., and Associates.

11:00—Television: Plastic Considerations in Minor Surgery in the Office, Including a Discussion of Suture Materials and Types of Incisions—Wilmer C. Hansen, M.D., and Associates.

11:30—Panel Interview of Discussants of the Day with Question and Answer Period—Arthur I. Kugel, M.D., Moderator.

TUESDAY, FEBRUARY 23

8:00 a.m. daily—Chartered bus leaves Wilshire entrance of Ambassador Hotel to go to White Memorial Hospital.

Chairman of the Day: Clarence E. Stafford, M.D.

9:00—Television: Demonstration of Office Surgical Procedures in General Surgery—Samuel H. Fritz, M.D., and Associates.

9:45—Television: Demonstration of Office Surgical Procedures in Gynecology—J. Arthur Johnson, M.D., and Associates.

Panel Discussion

10:30—Pitfalls and Cautions in Office Surgical Procedures.

Moderator: Clarence E. Stafford, M.D.

Participants: Departments of General Surgery, Dermatology, Orthopedic Surgery, Proctology and Urology.

11:00—Discussion—Oliver Cope, M.D.

11:30—Panel Interview of Discussants of the Day with Question and Answer Period—Arthur I. Kugel, M.D., Moderator.

2. INFECTIOUS DISEASES

Sunday, Monday and Tuesday Mornings, February 21, 22, 23

Chapman Park and Ambassador Hotels

Program planned by University of California School of Medicine, Los Angeles, Thomas H. Sternberg, M.D., Assistant Dean for Continuation Medical Education.

Course Chairman: William L. Hewitt, M.D.

Time: Sunday, Monday and Tuesday, February 21, 22 and 23, 9:00 a.m. to 12:00 noon.

Fee: \$25.00.

Instructional Staff:

California Medical Association Guest:

W. Barry Wood, Jr., M.D., Professor of Microbiology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

University of California School of Medicine, Los Angeles.

John M. Adams, M.D., Professor and Chairman of Pediatrics.

Wiley F. Barker, M.D., Associate Professor of Surgery.

Sydney M. Finegold, M.D., Assistant Professor of Medicine (in Residence).

Lucien B. Guze, M.D., Assistant Clinical Professor of Medicine.

William L. Hewitt, M.D., Professor of Medicine.

Victor D. Newcomer, M.D., Associate Professor of Medicine (Dermatology).

Aaron F. Rasmussen, M.D., Ph.D., Professor of Infectious Diseases.

Robert Roantree, M.D., Assistant Professor of Medical Microbiology at Stanford University School of Medicine, Palo Alto.

SUNDAY, FEBRUARY 21

Chapman Park Hotel

9:00—The Relationship of the Bactericidal Activity of Serum to Infection—Robert Roantree, M.D.

9:30—Immunity in Viral Infections—Aaron F. Rasmussen, M.D.

10:15—Cellular Mechanisms in Inflammation—W. Barry Wood, Jr., M.D.

Panel Discussion

11:00—Host Factors Related to Resistance to Infection.

Moderator: John M. Adams, M.D.

Panel: Robert Roantree, M.D., Aaron F. Rasmussen, M.D., and W. Barry Wood, M.D.

MONDAY, FEBRUARY 22

Oval Room, Ambassador Hotel

9:00—The Cause of Fever—W. Barry Wood, Jr., M.D.

9:45—Management of Fungal Infection—Victor D. Newcomer, M.D.

10:30—Infections Due to Anaerobic Bacteria—Sydney M. Finegold, M.D.

11:00—Management of Gram-Negative Bacillary Bacteremias—W. L. Hewitt, M.D.

11:30—Diagnosis and Management of Pyelonephritis—Lucien B. Guze, M.D.

TUESDAY, FEBRUARY 23

Oval Room, Ambassador Hotel

9:00—**Diagnosis and Management of Viral Respiratory Disease**—John M. Adams, M.D.

9:45—**Hospital Acquired Infections: Method of Spread**—Wiley F. Barker, M.D.

10:30—**Hospital Acquired Infections: Combatting the Problem**—Sydney M. Finegold, M.D.

Panel Discussion

11:00—**Rational Use of Antibiotic Agents**.

Moderator: William L. Hewitt, M.D.

Panel: Sydney M. Finegold, M.D., John M. Adams, M.D., and Victor D. Newcomer, M.D.

3. CLINICAL ENDOCRINOLOGY

Sunday, Monday and Tuesday Mornings, February 21, 22, 23

Los Angeles County General Hospital and Ambassador Hotel

Sponsored by California Medical Association Section on General Practice: Chairman, James S. Eley, M.D., Eureka; secretary, Floyd K. Anderson, M.D., Los Angeles.

Program planned by University of Southern California School of Medicine, Phil R. Manning, M.D., Associate Dean, Postgraduate Division.

Course Chairman: Donald W. Petit, M.D.

Time: Sunday, Monday and Tuesday, February 21, 22 and 23, 9:00 a.m. to 12:00 noon.

Fee: \$25.00.

8:00 a.m. *Sunday*—Chartered bus leaves Wilshire entrance of Ambassador Hotel to go to Los Angeles County General Hospital.

Instructional Staff:

California Medical Association Guests:

Oliver Cope, M.D., Associate Professor of Surgery, Harvard Medical School, Massachusetts General Hospital, Boston, Massachusetts.

Albert Segaloff, M.D., Director, Division of Endocrinology, Alton Ochsner Medical Foundation, New Orleans, Louisiana.

University of Southern California School of Medicine:

Franz Bauer, M.D., Associate Professor of Medicine.

Boris Catz, M.D., Associate Clinical Professor of Medicine.

Robert Commons, M.D., Assistant Clinical Professor of Medicine.

George Donnell, M.D., Associate Professor of Pediatrics.

Stanford Furer, M.D., Assistant Clinical Professor of Medicine.

Joan Hodgman, M.D., Assistant Professor of Pediatrics.

Bruce Kessler, M.D., Instructor in Medicine.

Robert Lowrey, M.D., Assistant Clinical Professor of Medicine.

Phil Manning, M.D., Associate Professor of Medicine.

Edward Merchant, M.D., Assistant Clinical Professor of Medicine.

Don Nelson, M.D., Associate Professor of Medicine.

Donald Petit, M.D., Associate Professor of Medicine.

Jud Scholtz, M.D., Clinical Professor of Medicine (Dermatology).

Dean Scofield, M.D., Instructor in Medicine.

Paul Starr, M.D., Professor of Medicine—Emeritus.

Richard Taw, M.D., Assistant Clinical Professor of

Obstetrics and Gynecology.

Robert Tranquada, M.D., Instructor in Medicine.
Bruce Walter, M.D., Instructor in Medicine.
Arnold Ware, Ph.D., Professor of Biochemistry and Nutrition.
Albert White, M.D., U.S.P.H. Service Trainee.

SUNDAY, FEBRUARY 21

8:00 a.m. *Sunday*—Chartered bus leaves Wilshire entrance of Ambassador Hotel to go to Los Angeles County General Hospital.

9:00 a.m.-12:30 p.m.—Los Angeles County General Hospital

9:00—**Introduction: Growth Problems**—George N. Donnell, M.D., and Joan Hodgman, M.D.

10:00—**Case Demonstrations:**

Osteoporosis..... 1 group —15 min.

Thyroid..... 3 groups—45 min.

Pituitary..... 2 groups—30 min.

Adrenal..... 2 groups—30 min.

Gonadal Abnormalities..... 2 groups—30 min.

The students will rotate every 15 minutes from patient to patient. The faculty will also rotate.

MONDAY, FEBRUARY 22

9:00 a.m.-12:00 noon—Regency Room, Ambassador Hotel

9:00—**Menstrual Irregularities**—Richard Taw, M.D., and Robert Commons, M.D.

9:30—**Diagnostic Problems in Thyroid Disease**—Boris Catz, M.D.

10:00—**The Nodular Thyroid**—Oliver Cope, M.D.

10:30—**Recess.**

10:45—**Thyroid Panel.**

TUESDAY, FEBRUARY 23

9:00 a.m.-12:00 noon—Regency Room, Ambassador Hotel

9:00—**Hirsutism**—Robert Commons, M.D., and Jud Scholtz, M.D.

9:30—**Oral Antidiabetic Drugs**—Robert Tranquada, M.D.

10:00—**Clinical Disorders of Sexual Differentiation**—Albert Segaloff, M.D.

10:30—**Recess.**

10:45—**Adrenal Panel.**

For Enrollment Application, see next page.

Scientific Exhibits

CASINO FLOOR

North End of Boulevard Room

Entrance through Ballroom

Maternal Mortality in California—California Medical Association Committee on Maternal and Child Care, James W. Ravenscroft, M.D., San Diego, Chairman; and State of California Department of Public Health, Bureau of Maternal and Child Health, Theodore A. Montgomery, M.D., Berkeley, Child Health Consultant.—A wall map of California will be displayed with counties shaded for population and marked with colored pins designating the different causes of maternal deaths such as hemorrhage, abortion, toxemia. In front of the wall map will be a miniature graveyard with divisions for each different cause of death and colored markers designating the number of deaths in each category.

Mechanical Assistance in Acute Heart Failure—Peter F. Salisbury, M.D., Burbank.—Relief of intensification of specific types of acute heart failure by various types of mechanical assistance will be illustrated. Drawings, photographs, charts and posters will be displayed as well as special blood pumps for mechanical assistance in acute heart failure.

Pelvic Pneumography—A Useful Adjunct to Clinical Examination—Richard S. Lee, M.D., G. Melvin Stevens, M.D., and John F. Weigen, M.D., Palo Alto.—The usefulness of this radiographic procedure as an adjunctive measure in light of the relative inaccuracy of bimanual pelvic examination will be demonstrated. Photographs, roentgenograms, charts and posters will be used.

Diagnosis of Acquired Heart Disease by Left Heart Catheterization—Jerome Harold Kay, M.D., and Robert Anderson, M.D., Los Angeles.—This exhibit will display typical left heart tracings of some common acquired valvular defects. Charts will show the approach and technique of left heart catheterization.

South End of Sunset Room

Entrance through Ballroom

Vasopressor Treatment of Shock—Eliot Corday, M.D., Beverly Hills; and John H. Williams, M.D., Jamaica Plain, Massachusetts, by invitation.—This exhibit will consist of three panels demonstrating by moulage, charts and posters the effect of shock and vasopressor drugs on the circulation of the heart, brain, liver, kidney and gastrointestinal tract.

Regional Perfusion in Cancer Therapy—Robert T. Hood, Jr., M.D., William H. Faeth, M.D., and Neal C. Hamel, M.D., Burbank.—Clinical and experimental results in the use of a pump oxygenator system for regional perfusion with cancercidal agents, and the effect of flow rate and pressure on "isolation" efficiency will be graphically shown by use of drawings, charts and posters.

Low Frequency Precordial Vibrations (Spectrograms)—Clarence M. Agress, M.D., Morris Wilburne, M.D., Martin Shickman, M.D., Los Angeles; Louis G. Fields and Stanley Wegner, by invitation, Los Angeles.—Methods of recording spectrograms, their application in cardiac diagnosis, and use in assessing myocardial function will be shown by means of photographs, charts and posters.

APPLICATION FOR ENROLLMENT

Mail to: POSTGRADUATE ACTIVITIES, CALIFORNIA MEDICAL ASSOCIATION
2975 Wilshire Boulevard, Los Angeles 5, California

With check or money order in the amount of \$25.00 made payable to the CALIFORNIA MEDICAL ASSOCIATION. Check the course you plan to attend.

Name _____

Address _____

I am in General Practice _____ I limit my practice to _____

Medical School Attended _____ Year of graduation _____

- 1. Minor Surgery in the Office (9-hour course, Sunday, Monday and Tuesday mornings)
- 2. Infectious Diseases (9-hour course, Sunday, Monday and Tuesday mornings)
- 3. Clinical Endocrinology (9-hour course, Sunday, Monday and Tuesday mornings)

WOMAN'S AUXILIARY to the CALIFORNIA MEDICAL ASSOCIATION

Thirtieth Annual Convention, February 21 to 23, 1960

Headquarters: Ambassador Hotel, Los Angeles



MRS. THEODORE A. POSKA, President



MRS. SAMUEL GENDEL, President-Elect

Convention Chairman: MRS. ARTHUR T. BAILEY

REGISTRATION

Main Lobby

Sunday, February 21—9:00 a.m. to 4:00 p.m.
Monday, February 22—8:30 a.m. to 4:00 p.m.
Tuesday, February 23—8:30 a.m. to 10:00 a.m.

SATURDAY, FEBRUARY 20

7:30 p.m.—Annual Report of the Woman's Auxiliary by the President, Mrs. Theodore A. Poska, to the California Medical Association House of Delegates, Embassy Room. All doctors' wives are invited to attend. (Auxiliary members will not register for this meeting. Woman's Auxiliary Registration will start Sunday morning in the Main Lobby.)

SUNDAY, FEBRUARY 21

9:00 a.m.—Executive Committee breakfast meeting, Oval Room E.
2:30 p.m.—Pre-Convention Board Meeting, Grove Lounge.
7:00-8:00 p.m.—California Medical Association Reception honoring Doctor T. Eric Reynolds, President of the California Medical Association, and Mrs. Theodore A. Poska, President of the Woman's Auxiliary to the California Medical Association, Regency Room. (By invitation.)
8:00 p.m.—Presidents' Dinner and Ball honoring the Presi-

dent of the California Medical Association, Dr. T. Eric Reynolds, and the President of the Woman's Auxiliary to the California Medical Association, Mrs. Theodore A. Poska, Cocoanut Grove. Formal dress optional.

MONDAY, FEBRUARY 22

9:00 a.m.—First Business Session of the 30th Annual Meeting, Embassy Room. Mrs. Theodore A. Poska, presiding.
2:15 p.m.—Second Business Session, East Venetian Room.

TUESDAY, FEBRUARY 23

9:00 a.m.—Third Business Session, Embassy Room. Mrs. Theodore A. Poska, presiding.
12:45 p.m.—Luncheon in honor of Mrs. Theodore A. Poska and Mrs. Samuel Gendel; Members of the State Advisory Board, and Past State Presidents, Cocoanut Grove.
3:00 p.m.—Post-Convention Board Meeting, Grove Lounge. Mrs. Samuel Gendel, presiding.

APPLICATION FOR HOUSING ACCOMMODATIONS

FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the California Medical Association, February 21*-24, 1960, Los Angeles, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.

Eighty-ninth Annual Session CALIFORNIA MEDICAL ASSOCIATION Los Angeles, California FEBRUARY 21*-24, 1960

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*February 20: House of Delegates will start with evening meeting Saturday, February 20.

†The above quoted rates are existing rates but are subject to any change which may be made in the future.

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CLINICAL-PATHOLOGICAL CONFERENCE

(Continued from Page 13)

her previous complaints of cramping abdominal pain, diarrhea, burning epigastric pain and dysphasia.

Physical examination was not unusual and laboratory work showed again a normal total protein, amylase of 84 per cent, and normal calcium and phosphorus. The fasting blood sugar was not done. The uropepsin value was 1.23 log units per hour which was stated to be the highest recorded in that laboratory at that time. This was 8 months after the subtotal gastrectomy.

On April 28, 1953 she had a transthoracic vagotomy through a left thoracotomy incision and the operative notes state specifically that both major trunks of the vagus nerve were cut.

On May 6, the second gastric analysis in her hospital course was done and showed no free acid, and 42 clinical units of total acid before histamine. It was now 9 months after her subtotal gastrectomy. The postoperative course was uneventful and she was discharged.

She was seen again December 4, 1953 to February 8, 1954. She had lost weight, from 92 to 76 pounds, and complained again of diarrhea to the extent of 12 loose stools per day. The stools contained food which she had ingested within the past hour or two.

She continued to have the burning epigastric pain which was relieved by food. Physical examination at this time was unchanged with the pigmented lesion still present, the clubbing still present and an essentially negative abdominal examination. The blood pressure was 60/44, laboratory work showed reversal of the A-G ratio with a total protein of 4.2. Fasting blood sugar was 67, calcium 7.5. The uropepsin was .4914 log units and she had no gastric free acid. This was 15 months after her subtotal gastrectomy.

On December 16, after gastrointestinal examination had showed a jejunocolic fistula she was again operated upon. No mention is made in the operative note of the pancreas, but it is stated that no marginal ulcer was felt. The jejunocolic fistula was taken down. Her postoperative course was again complicated by episodes of tetany, wound infection, and vomiting.

On January 8 she was found to be markedly obtunded and febrile. Physical examination on this occasion, as on previous occasions in the similar state, was unremarkable except for the fact that she was obtunded. For the first time no definite cause could be found as all laboratory examinations were within normal limits. She responded to symptomatic treatment but the diarrhea and vomiting persisted.

On January 26 gastrointestinal examination revealed obstruction of the distal transverse colon and question of fistula. On January 27, six weeks after the first fistula had been repaired, she was again explored and a jejunal ulcer was found immediately opposite the gastrojejunostomy stoma. This led into the transverse colon. In addition there was a jejunal ulcer distal to this point which led into a blind pocket. The previous sites of fistula repair were not involved. The pancreas was not involved. The entire area was excised, removing en bloc the gastrojejunostomy together with the fistula to the transverse colon, and an end-to-end jejuno-jejunostomy was done and a posterior gastrojejunostomy was reconstituted, and the transverse colon was brought out to the abdominal wall as a double-barreled transverse colostomy.

Following this operation she became febrile, obtunded and her course was rapidly downhill, with a bloody oliguria of 150 to 200 cc. per day. She developed anasarca with rising potassium and nonprotein nitrogen and expired quietly on February 8, 1954.

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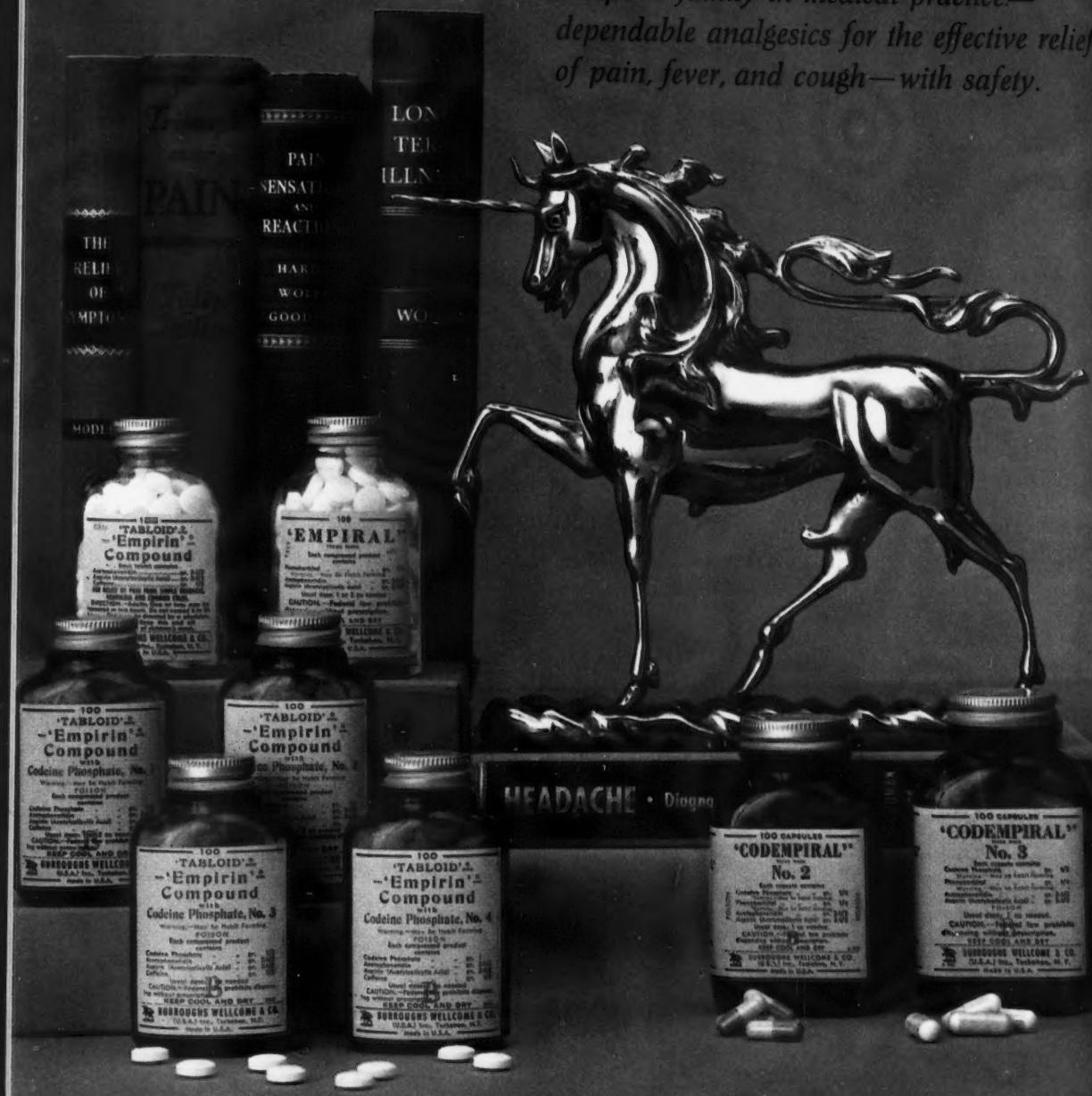
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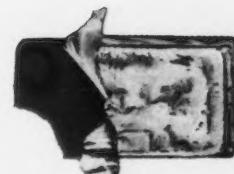
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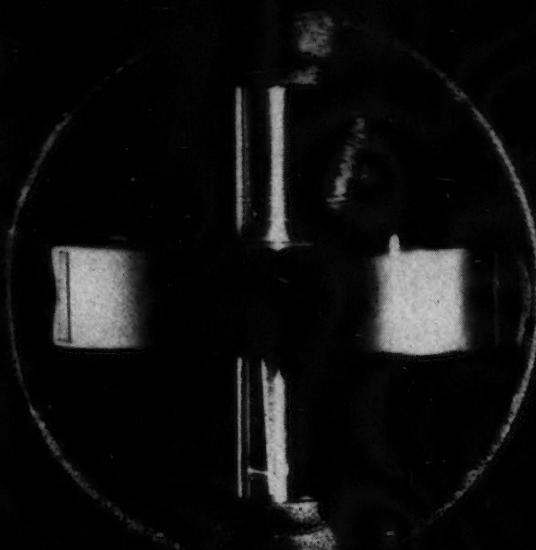
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**Cholesterol Role in Heart
Disease Still Unknown**

The significance of lowered blood cholesterol levels in the prevention and treatment of heart disease is not definitely known, according to the American Medical Association's Council on Foods and Nutrition.

Methods of manipulating the blood levels of cholesterol have become of utmost interest, and because their importance is unknown confusion has resulted, the council said in a report in the August 29 issue of the *Journal of the American Medical Association*.

In an attempt to keep physicians informed of current knowledge about cholesterol, the council presented the views of five foremost researchers in the field.

"Of all the chemical compounds that are measured in clinical laboratories, there is none about which more has been written and about which less is understood than cholesterol," according to Dr. Lawrence W. Kinsell, Institute for Metabolic Research, Highland-Alameda County Hospital, Oakland, California.

It is well established, he said, that, statistically, elevated levels of cholesterol are found in association with atherosclerosis. It seems reasonable, therefore, to believe that measures directed toward lowering the levels may work in a desirable way. However, since cholesterol is a normal essential part of the human body, "it is obvious that attempts to 'get rid of' this compound would be both unphysiological and impossible," Dr. Kinsell said.

The objective, then, must be to achieve normal cholesterol metabolism with consequently normal blood levels in the hope that such a program will prevent abnormal deposits of cholesterol in the blood vessels, Dr. Kinsell stated.

Among the methods mentioned by the physicians are the use of diet, such drugs as nicotinic acid, estrogens, and increased exercise.

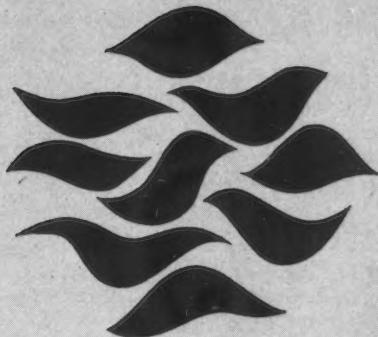
The significance of lowered levels hinges on the question: How fundamental is the role of this substance in the development of atherosclerosis?

According to Dr. W. Stanley Hartroft, of the department of pathology, Washington University Medical School, St. Louis, rat studies at his school have shown that the development of heart disease in an individual rat could not be predicted on the basis of its level of cholesterol.

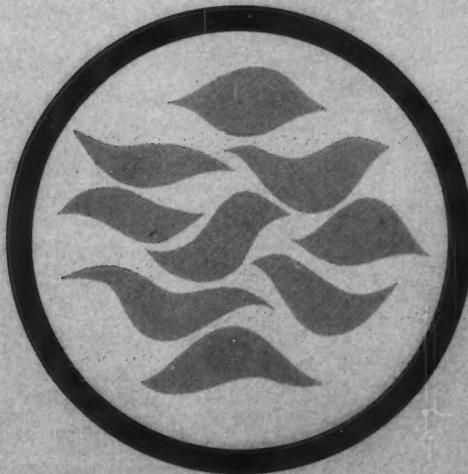
This and other studies have suggested that when all the facts are uncovered, it "is not unlikely" that some other substance or substances in the blood may have a more direct bearing on the problem of atherosclerosis than does cholesterol, Dr. Hartroft said.

Research into the role of cholesterol and other factors must, of course, continue, he said. But in

(Continued on Page 16)



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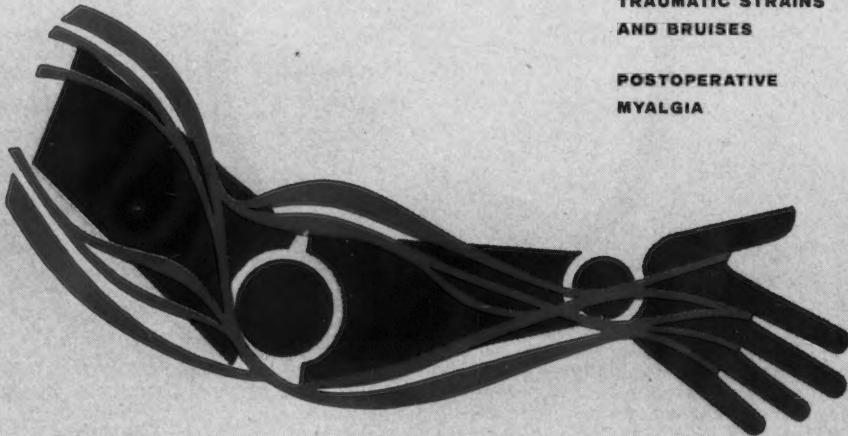
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Cholesterol Role in Heart Disease Still Unknown

(Continued from Page 12)

the meantime, there is probably little reason to recommend attempts to lower cholesterol levels in the blood of healthy men and women as long as those values fall within the usual ranges for people in the United States.

Dr. Edward H. Ahrens, Jr., and his co-workers at the Rockefeller Institute, New York, agree with Dr. Hartroft. They said, "Widespread, drastic revision of dietary practice seems unwarranted at this time." They hope that a more certain and direct approach to the prevention of atherosclerosis will be forthcoming as knowledge increases.

Dr. Ahrens listed several points of agreement concerning cholesterol. They are:

—Substitution of dietary fats rich in polyunsat-

urated fatty acids for those rich in saturated fats will lower cholesterol levels in almost every person, whether he has normal or above-normal cholesterol levels.

—The greater the substitution, the greater the effect; thus little benefit is obtained by merely adding a supplement of polyunsaturated fat to an otherwise unchanged diet.

—The effects of substitution are due to differences in fatty acid structure and not to trace factors such as vitamins, minerals, sterols, or other undefined nonfatty acid substances.

—The oral administration of other agents, such as nicotinic acid, also decreases serum cholesterol levels, but presumably by other mechanisms.

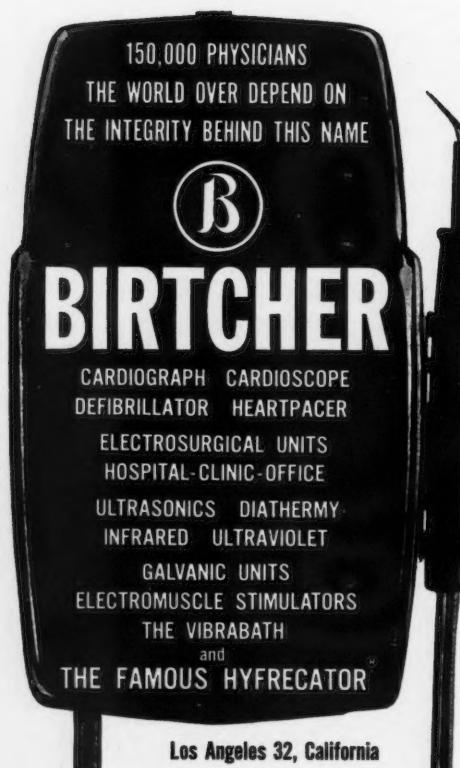
Dr. Joseph M. Merrill, Veterans Administration Hospital, Nashville, Tennessee, warned that drugs and diets are still in their experimental stage and probably should be left to the investigator.

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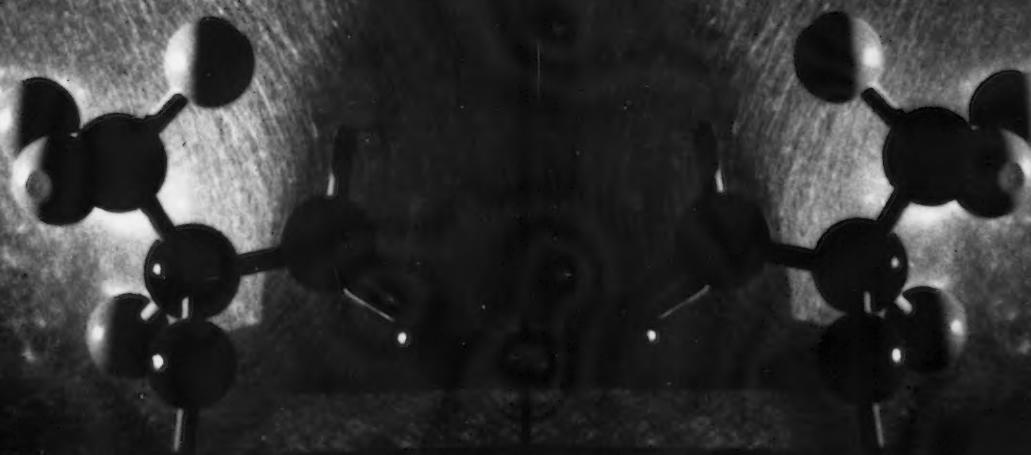
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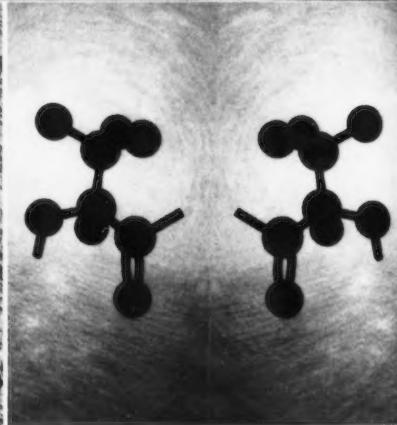
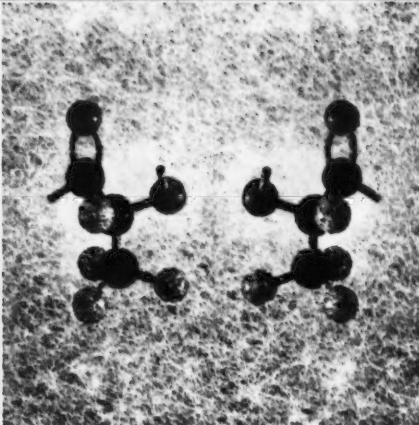
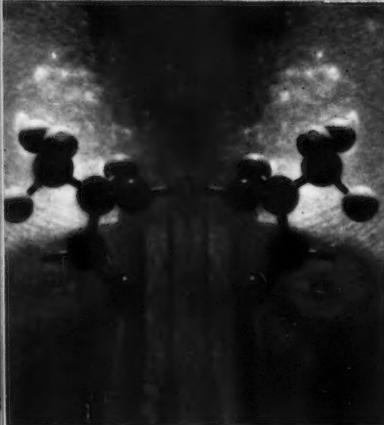
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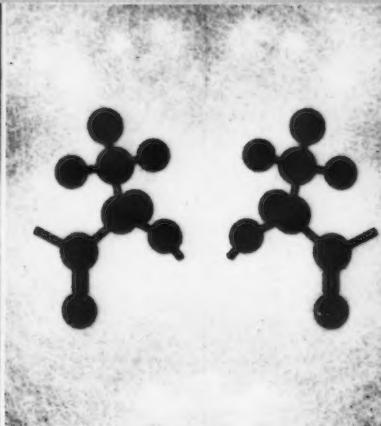
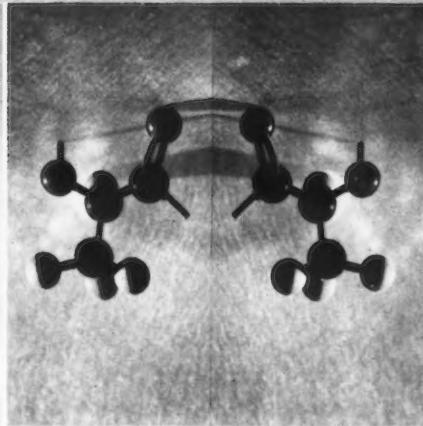
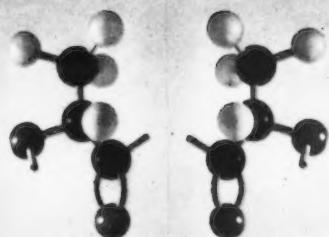
**SAFER ORAL ROUTE
PROVIDES HIGHER
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INTRAMUSCULAR
PENICILLIN G**

**IMPROVED
ANTIBIOTIC
EFFECT FROM
COMPLEMENTARY
ACTION OF ISOMERS**

ADVANTAGES ACCOMPANY MOLECULAR ASYMMETRY

H U L I N

POTASSIUM PENICILLIN-152



*ANTIBIOTIC
ACTIVITY
DIRECTLY
PROPORTIONAL
TO ORAL DOSE*

*REDUCED HAZARD
OF SERIOUS
ALLERGENICITY
BY SAFER
ORAL ROUTE*

*MANY
STAPH STRAINS
MORE
SENSITIVE TO
SYNCILLIN*



ORIGIN OF A NEW SYNTHETIC PENICILLIN

In March, 1957, Dr. John C. Sheehan of the Massachusetts Institute of Technology announced the total synthesis of penicillin from common raw materials, thus solving a problem which had baffled research workers for more than 15 years. Although total synthesis was not commercially practicable, this work, sponsored by Bristol Laboratories, made possible the subsequent synthesis of new penicillins not occurring in nature. Later scientists at Beecham Laboratories in England discovered that a key intermediate (6-aminopenicillanic acid) could be produced by a fermentation process. With these achievements, large scale production of synthetic penicillins became feasible.

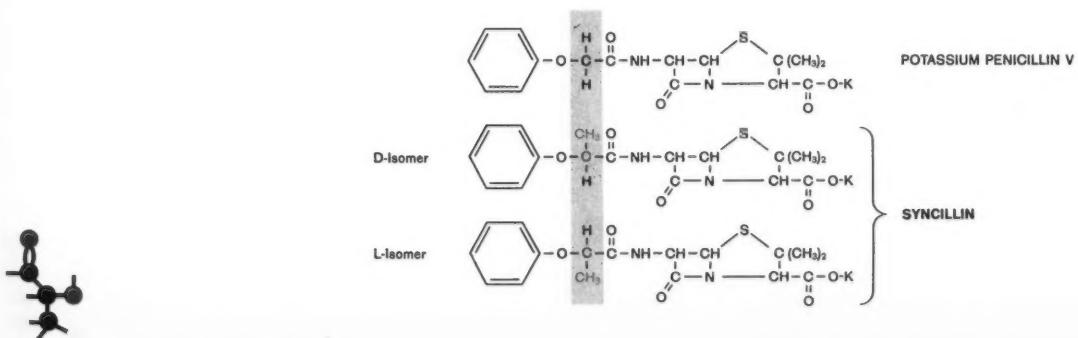
Organic chemists at Bristol then embarked upon an intensive program to develop better penicillins. Over five hundred were synthesized and underwent preliminary screening. Forty-six showed sufficient promise to warrant further investigation. Extensive microbiological, pharmacological, and clinical screening indicated that one compound, SYNCILLIN, had advantages of major importance over other penicillins.

SYNCILLIN is the N-acylation product of 6-aminopenicillanic acid and α -phenoxypropionic acid (the phenylether of lactic acid). It is freely soluble in water and remarkably resistant to decomposition by acid. The acid stability of SYNCILLIN is equivalent to that of penicillin V at pH 2 and pH 3 at 37° C.¹

SIGNIFICANCE OF MOLECULAR ASYMMETRY AND ISOMERIC COMPLEMENTARITY

SYNCILLIN has a molecular configuration similar to penicillin V, but contains an additional CH_3 group so positioned as to render the adjacent carbon atom asymmetric. (In the formulae below, the added CH_3 group is shown in blue and the asymmetric carbon atom in red.) As a result, SYNCILLIN occurs as a mixture of two isomers.

Each isomer has been synthesized in essentially pure form and found to possess distinctive chemical and biological properties. The L-isomer is 2 to 17 times more active than the D-isomer against many of the organisms tested. As produced, SYNCILLIN is a mixture of the L-isomer and the D-isomer. As will be shown later, the antibiotic effect of the clinically available mixture, SYNCILLIN, is greater than either isomer alone against many organisms. This phenomenon is referred to here as *isomeric complementarity*.



SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

ISOMERIC COMPLEMENTARITY DEMONSTRATED IN VITRO

The *in vitro* minimum inhibitory concentration (MIC) of SYNCILLIN and of each of its two component isomers was determined for a variety of common pathogens and laboratory test organisms. As may be seen from Table 1, all three are highly effective against penicillin-susceptible staphylococci and against pneumococci, streptococci, gonococci, and corynebacteria; all are ineffective against *Salmonella*, *E. coli*, and other gram-negative coliform bacilli.

SYNCILLIN was more active against many of the test strains including some streptococci and staphylococci than either of its components. This demonstrates *in vitro* the phenomenon of isomeric complementarity.

TABLE 1
Minimum Concentrations of SYNCILLIN and Components
Required to Inhibit a Wide Range of Bacteria

Minimum Inhibitory Concentration (MIC) in Micrograms per Milliliter

| | L-isomer | D-isomer | SYNCILLIN |
|---|----------|----------|-----------|
| <i>Bacillus anthracis</i> | 0.06 | (0.25 | 0.03 |
| <i>Bacillus cereus</i> | 12.5 | 100 | 25 |
| <i>Bacillus circulans</i> ATCC 9961 | 0.25 | 0.25 | 0.25 |
| <i>Corynebacterium xerosis</i> | 0.06 | 0.125 | 0.03 |
| * <i>Diplococcus pneumoniae</i> | 0.06 | 0.06 | 0.06 |
| <i>Escherichia coli</i> ATCC 8739 | >100 | >100 | >100 |
| <i>Gaffkya tetragena</i> | 0.015 | 0.03 | (0.05 |
| <i>Micrococcus flavus</i> | 0.015 | 0.025 | (0.05 |
| <i>Salmonella paratyphi A</i> | 25 | 50 | 25 |
| <i>Salmonella typhosa</i> | >100 | >100 | >100 |
| <i>Sarcina lutea</i> ATCC 10054 | 0.007 | 0.12 | (0.007 |
| <i>Shigella sonnei</i> | 100 | 100 | 100 |
| <i>Staphylococcus aureus</i> 209P | 0.06 | 0.125 | 0.03 |
| <i>Staphylococcus aureus</i> var. Smith | 0.03 | 0.125 | 0.03 |
| <i>Streptococcus agalactiae</i> ATCC 1077 | 0.03 | 0.06 | 0.03 |
| <i>Streptococcus dysgalactiae</i> ATCC 9926 | 0.03 | 0.06 | 0.03 |
| <i>Streptococcus faecalis</i> PCI 1305 | 0.25 | 25 | 0.25 |
| * <i>Streptococcus pyogenes</i> 203 | 0.06 | 0.06 | 0.06 |
| * <i>Streptococcus pyogenes</i> Digonnet | 0.03 | 0.06 | 0.06 |
| <i>Streptococcus pyogenes</i> 2320 | 0.06 | 0.06 | 0.06 |
| <i>Streptococcus pyogenes</i> 23586 | 0.16 | 0.06 | 0.16 |
| <i>Vibrio comma</i> | 50 | 25 | 25 |

Serial dilution technique in heart infusion broth. *10% serum added.



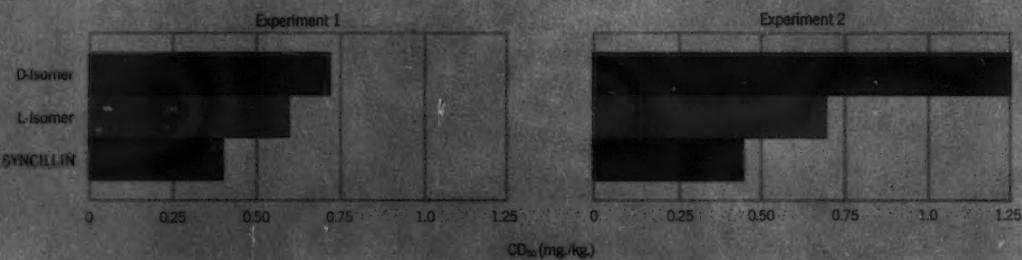
SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

ISOMERIC COMPLEMENTARITY CONFIRMED IN VIVO

To determine the median curative dose (CD_{50}) mice were infected with 100 times the lethal dose of *Staphylococcus aureus*. Each penicillin being tested was administered intramuscularly at the same time, and the dose required to cure half the animals determined. The greater effect of the mixture of the two isomers (SYNCILLIN) is shown in two independent experiments. (See Figure 1.) Note that isomeric complementarity is thus confirmed *in vivo*.

FIGURE 1 — Median Curative Dose (CD_{50}) for *Staphylococcus aureus* (var. Smith) Infections

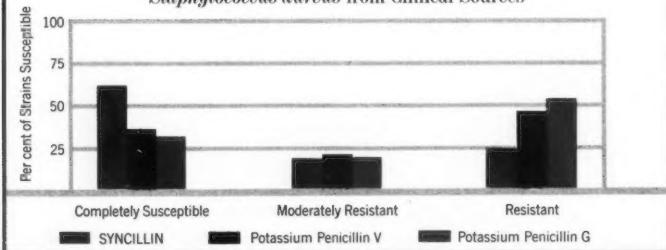


MANY STRAINS OF STAPHYLOCOCCI MORE SENSITIVE TO SYNCILLIN

SYNCILLIN has been tested against a large number of strains of *Staphylococcus aureus* isolated from clinical sources. Many organisms resistant to potassium penicillin G and potassium penicillin V proved sensitive to SYNCILLIN.

Wright² performed sensitivity studies on 54 strains, the majority of which were resistant or moderately resistant to penicillin V and penicillin G. Thirty-two (60%) of the strains were sensitive to SYNCILLIN, approximately twice as many as with the other penicillins. (See Figure 2.) In two-thirds of the isolates, SYNCILLIN produced inhibition at concentrations lower than those required for either of the other antibiotics. One strain was more sensitive to penicillin G.

FIGURE 2 — *In Vitro* Sensitivity of 54 Strains of Coagulase-Positive *Staphylococcus aureus* from Clinical Sources



Adapted from Wright²

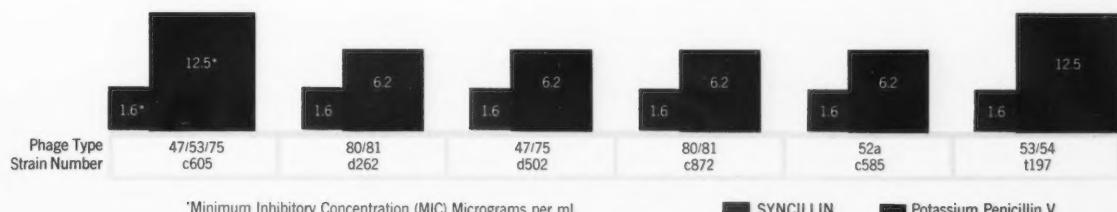


SYNCILLIN

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Of equal interest are the findings of White.³ Six penicillin-resistant strains of staphylococci were isolated from hospital infections. None was sensitive to potassium penicillin V. All were sensitive to SYNCILLIN. (See Figure 3.)

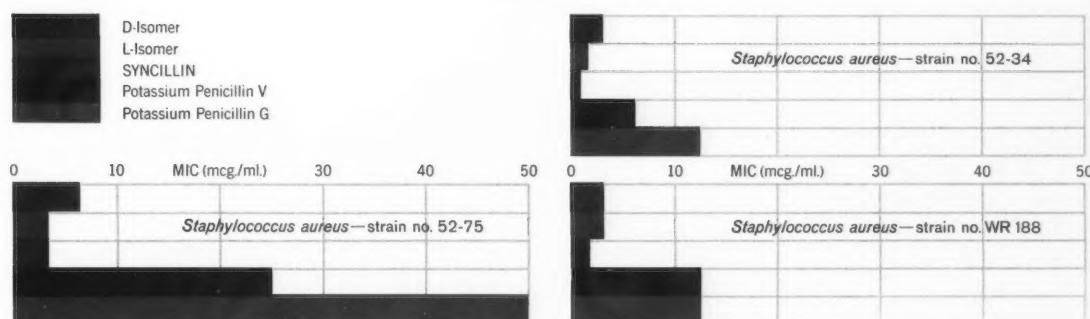
FIGURE 3
Minimum Concentrations of SYNCILLIN Required to Inhibit Hospital Strains of *Staphylococcus aureus* Resistant to Potassium Penicillin V



The efficacy of SYNCILLIN against the type 80/81 Staphylococcus (dangerous and widespread in hospitals) is worthy of special attention.

The complementary action of the component isomers is also seen with strains of staphylococci resistant to penicillins. Note that SYNCILLIN is more effective than either isomer against strains 52-34 and WR 188. (See Figure 4.) Against all three strains, SYNCILLIN is effective at concentrations below serum levels, while penicillins V and G are ineffective.

FIGURE 4
Minimum Inhibitory Concentrations (MIC) for Coagulase-Positive Penicillin-Resistant Strains of *Staphylococcus aureus*



Isomeric complementarity has thus been demonstrated for:

- certain penicillin-susceptible streptococci, staphylococci and corynebacteria in vitro (Table 1)
- penicillin-susceptible staphylococci in vivo (Figure 1)
- penicillin-resistant staphylococci in vitro (Figure 4)

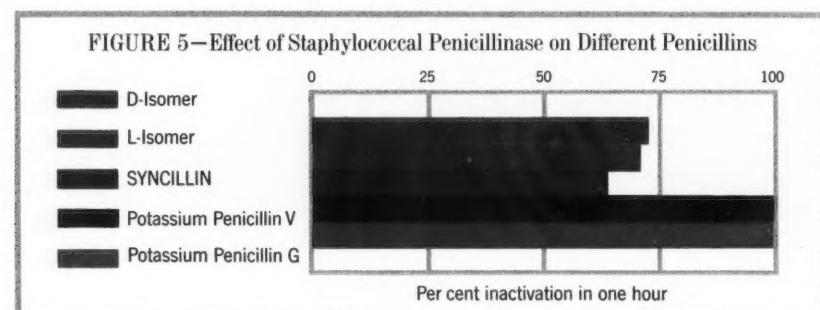


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ISOMERIC COMPLEMENTARITY SHOWN BY REDUCED RATE OF INACTIVATION BY PENICILLINASE

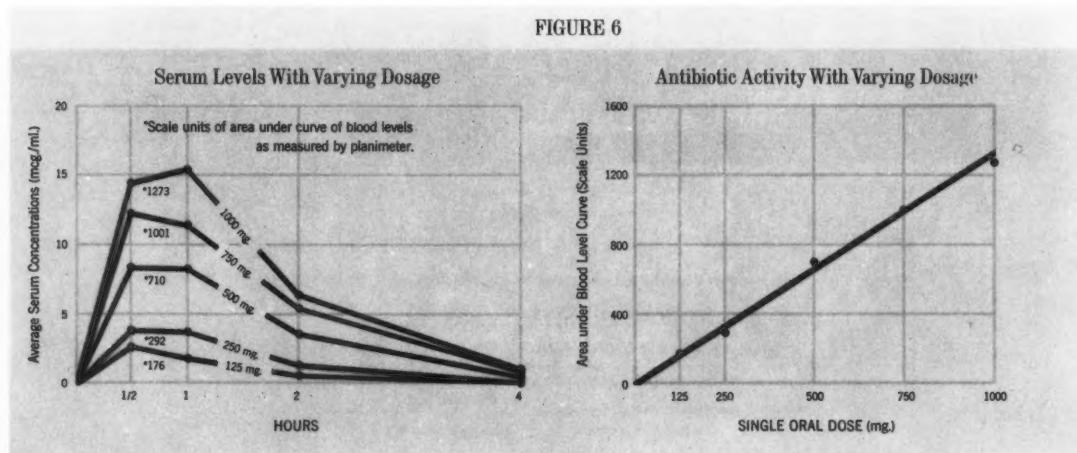
Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms.⁴ As shown in Figure 5, SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers — a further demonstration of isomeric complementarity. Further, SYNCILLIN is shown to be less inactivated by this enzyme than penicillin V and penicillin G.

Resistance to SYNCILLIN develops in a slow, step-wise manner characteristic of other penicillins, in contrast to the usually rapid development of resistance to streptomycin.



ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSAGE

Cronk⁵ studied blood levels after administering varying amounts of SYNCILLIN. (Figure 6.) Total antibiotic activity (obtained by measuring areas under curves with a planimeter) increases rapidly as the dose is doubled. These data show that increased dosage markedly increases serum concentration and thus may enhance the drug's effectiveness.



SYNCILLIN

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BLOOD LEVELS TWICE AS HIGH AS WITH POTASSIUM PENICILLIN V AFTER ORAL ADMINISTRATION

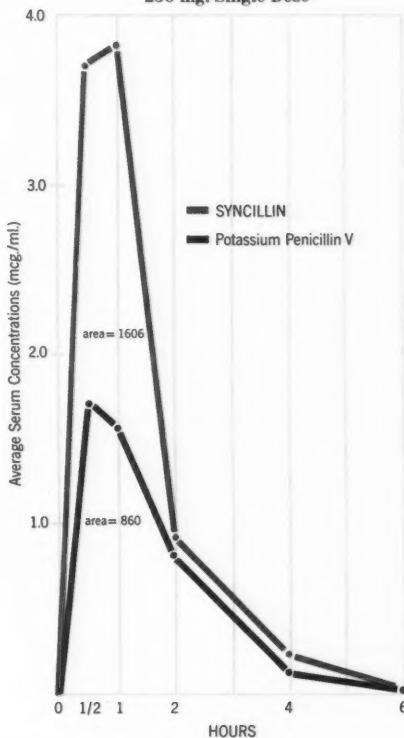
Wright⁶ performed comparative crossover blood level studies on volunteer subjects receiving equivalent amounts of potassium penicillin V and SYNCILLIN. The peak concentrations attained during the first hour after administration were twice as high with SYNCILLIN.

The total antibiotic activity as measured by the area under the curves (see Figure 7) indicates an almost 2 to 1 superiority of SYNCILLIN (1606) over potassium penicillin V (860).

The higher blood levels may be of value with organisms of only moderate penicillin-sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition these higher levels may be necessary where there is infection in areas with a poor blood supply.⁷ Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue.

FIGURE 7

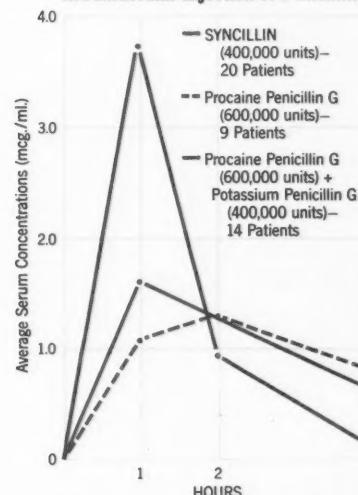
20 Subject Crossover
250 mg. Single Dose



BLOOD LEVELS MUCH HIGHER THAN WITH INTRAMUSCULAR PENICILLIN G

In addition, blood levels attained with oral SYNCILLIN⁶ are much higher than those with intramuscular penicillin G.^{8a, b} (See Figure 8.) Note that the level at one hour for SYNCILLIN (3.8 mcg./ml.) is more than twice as high as with procaine penicillin G, even when reinforced with potassium penicillin G (1.6 mcg./ml.). Since penicillins are *bactericidal*, these intermittent high serum levels can be clinically significant. Thus, SYNCILLIN offers the promise of superior efficacy via the safer oral route.

FIGURE 8—Serum Levels after Oral Administration of SYNCILLIN (250 mg.) and after Intramuscular Injection of Penicillin G



SYNCILLIN

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REDUCED HAZARD OF SERIOUS ALLERGENICITY BY SAFER ORAL ROUTE

SYNCILLIN has been administered in multiple doses to 437 patients and volunteers. One patient developed itching during therapy, possibly an allergic side effect. Another had a purpuric rash, but no relationship to SYNCILLIN was established. No reactions were observed in 9 patients with a known history of sensitivity to penicillin.

While the above data suggests the possibility of reduced allergenic hazard, no definite conclusions may be drawn at this time. *The usual precautions for oral penicillin therapy should be observed.* Patients with histories of asthma, hay fever, urticaria, or previous penicillin-sensitivity should especially be watched carefully. Since SYNCILLIN is administered orally, it may be expected to be safer than parenteral penicillin.

As Flippin⁹ recently stated, "... it is well established that serious allergy to the drug [penicillin] is most likely to occur following parenteral administration, especially after repeated intramuscular injections; the oral route is least likely to initiate severe hypersensitivity reactions. This can be explained partly by the fact that when reactions develop following oral medication, they are usually slow enough to treat symptomatically; thus the progression of the reaction can usually be interrupted. . . . In view of the relatively high incidence of severe allergy to injectable penicillin, it would seem advisable to employ oral penicillin routinely, except in the control of infections involving the blood stream, endocardium, meninges, etc., in which cases the parenteral route remains the preferred treatment."

SYNCILLIN, like other penicillins, is essentially free of other toxicity. No hematopoietic, hepatic, or renal toxicity was observed in 210 volunteers receiving 1 gm. daily for 2 to 3 weeks.¹⁰

CLINICAL EFFICACY DEMONSTRATED IN PENICILLIN-SENSITIVE INFECTIONS

Clinical trials conducted by Blau and Kanof,¹¹ White,¹² Prigot,¹³ Robinson,¹⁴ Dube,¹⁵ Ferguson,¹⁶ Rutenburg,¹⁷ Richardson,¹⁸ Bunn,¹⁹ Cronk,⁵ Kligman,¹⁰ and Yow²⁰ demonstrated the efficacy of SYNCILLIN in a variety of streptococcal, staphylococcal, pneumococcal, and gonococcal infections. Conditions treated included respiratory, skin, soft tissue, wound, and chronic urinary tract infections; acute gonorrhea; cellulitis; septicemia; otitis media; gingivitis; and Vincent's angina. In a few patients SYNCILLIN was used for rheumatic fever or gonorrheal prophylaxis.

One hundred seventy-two of one hundred ninety-six patients responded favorably to SYNCILLIN. The failures included 1 patient with pustular dermatoses, 10 elderly patients with chronic urinary tract infections, 1 patient with gonorrhea, 1 patient with a gram-negative infection, and 10 patients with staphylococcal infections. Lack of response of staphylococcal infections was attributed to the presence of resistant organisms or local suppurative foci requiring drainage.



SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

Relatively few side effects were encountered. One patient experienced moderate itching of the skin which was controlled by an antihistamine. Another reported pruritus ani which did not interfere with therapy. Diarrhea occurred in 4 instances. There was one purpuric rash, but no relationship to SYNCILLIN could be established.

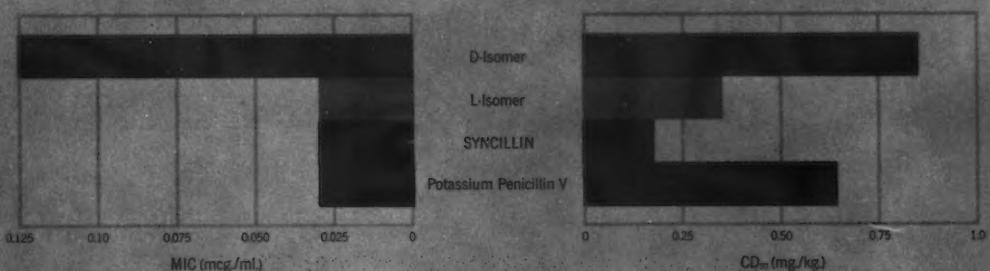
Clinical response usually begins within 24 hours in infections susceptible to SYNCILLIN. Recovery occurs in 4 to 7 days depending upon the severity of the infection. Gonorrheal infections respond very promptly to SYNCILLIN; 500 mg. b.i.d. for two days usually produce bacteriologic cures.

IMPROVED ANTIBIOTIC EFFECT FROM COMPLEMENTARY ACTION OF ISOMERS

SYNCILLIN is a mixture of isomers. The L-isomer is 2 to 17 times more active than the D-isomer against many of the organisms tested. Furthermore, the D- and L-isomers have other distinguishing chemical, pharmacological, and microbiological properties. Their *in vivo* and *in vitro* activities differ for many important pathogens. *Against many of the organisms tested, the combination of isomers (SYNCILLIN) is much more active than the stronger isomer alone.* This phenomenon of isomeric complementarity is not always demonstrable, for in a few instances SYNCILLIN is slightly less active.

Isomeric complementarity has previously been demonstrated *in vitro* (Figure 4) and *in vivo* (Figure 1). Figure 9 reveals a third form of superiority related to isomeric complementarity. Equal concentrations of SYNCILLIN and penicillin V were required to inhibit this growth of staphylococci *in vitro*. But, *in vivo*, a much smaller amount of SYNCILLIN (*one-third that of penicillin V*) was effective in an experimental infection with the same strain. These observations on complementary action indicated the advantage of producing the mixture of isomers as the medication to be made available for clinical therapy.

FIGURE 9—Comparison of CD_{50} and MIC Values Against *Staphylococcus aureus* (var. Smith)



Isomeric complementarity has thus been demonstrated for:

- certain penicillin-susceptible streptococci, staphylococci and corynebacteria *in vitro* (Table 1)
- penicillin-susceptible staphylococci *in vivo* (Figures 1 and 9)
- penicillin-resistant staphylococci *in vitro* (Figure 4)
- staphylococcal penicillinase antibiotic inactivation (Figure 5)



Indications:

SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective against certain strains of staphylococci resistant to other penicillins.

SYNCILLIN, like other oral penicillins, is not recommended at the present time in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

Dosage:

125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals.

Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions:

While present data suggest the possibility of reduced allergenic hazard, no definite conclusions may be drawn at this time. *Therefore the usual precautions with oral penicillin therapy must be observed.* Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care.

Diarrhea has been reported occasionally following heavy dosage. If this occurs, the interval between dosages should be lengthened.

If superinfection occurs during therapy, appropriate measures should be taken.

Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

Supply:

125 and 250 mg. tablets, bottles of 25 and 100. 125 mg. powder for oral solution, 60 ml. vials.

References: 1. Lein, J.: Microbiology report to Bristol Laboratories Inc. 2. Wright, W. W.: Microbiology report to Bristol Laboratories Inc. 3. White, A. C.: Microbiology report to Bristol Laboratories Inc. 4. Dubos, R. J.: *Bacterial and Mycotic Infections of Man*, 3rd edition, Philadelphia, J. B. Lippincott Co., p. 690. 5. Cronk, G. A.: Clinical report to Bristol Laboratories Inc. 6. Wright, W. W.: Clinical report to Bristol Laboratories Inc. 7. Kass, E. H.: *Am. J. Med.* 18:764 (May) 1955. 8a. White, A. C.; Couch, R. A.; Foster, F.; Calloway, J.; Hunter, W., and Knight, V.: in Welch, H. and Marti-Ibañez, F.: *Antibiotics Annual — 1955-1956*, Medical Encyclopedia, Inc., New York, 1956, p. 490. b. Data on file — at Bristol Laboratories. 9. Flippin, H. F.: *Pennsylvania M. J.* 62:864 (June) 1959. 10. Kligman, A.: Clinical report to Bristol Laboratories Inc. 11. Blau, S., and Kanof, N.: Clinical report to Bristol Laboratories Inc. 12. White, A. C.: Clinical report to Bristol Laboratories Inc. 13. Prigot, A.: Clinical report to Bristol Laboratories Inc. 14. Robinson, C.: Clinical report to Bristol Laboratories Inc. 15. Dube, A. H.: Clinical report to Bristol Laboratories Inc. 16. Ferguson, B.: Clinical report to Bristol Laboratories Inc. 17. Rutenburg, A. M.: Clinical report to Bristol Laboratories Inc. 18. Richardson, J. H.: Clinical report to Bristol Laboratories Inc. 19. Bunn, P. A.: Clinical report to Bristol Laboratories Inc. 20. Yow, E. M.: Clinical report to Bristol Laboratories Inc.



major therapeutic advantages accompany molecular asymmetry

SYNCILLIN

Fostex® treats their acne while they wash



degreases the skin

helps remove blackheads

dries and peels the skin

...and this is how it works

Fostex provides essential actions necessary in treating acne. It washes off excess oil. It unblocks pores by penetrating and softening blackheads. It dries and peels the skin, removing papule coverings, thus permitting drainage of sebaceous glands.

Fostex contains Sebulytic®,* a combination of surface-active wetting agents with remarkable antiseborrhic, keratolytic and antibacterial actions . . . enhanced by sulfur 2%, salicylic acid 2%, hexachlorophene 1%.

*sodium lauryl sulfacetate, sodium alkyl aryl polyether sulfonate and sodium diethyl sulfosuccinate.

Your patients will like Fostex because it is so simple to use. They simply wash acne skin 2 to 4 times a day with Fostex, instead of using soap.



FOSTEX CREAM

. . . in 4.5 oz. jars. For therapeutic washing in the initial phase of oily acne treatment.

Write for samples.



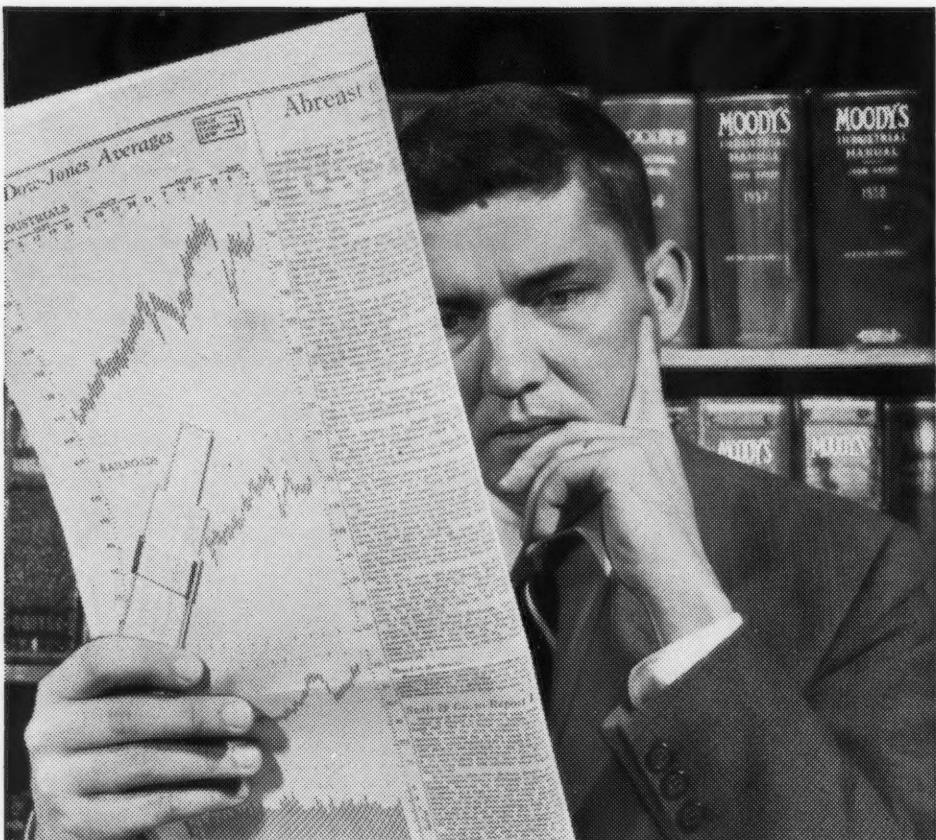
FOSTEX CAKE

. . . in bar form. For therapeutic washing to keep the skin dry and free of blackheads during maintenance therapy. Also used in relatively less oily acne.

WESTWOOD PHARMACEUTICALS

•

Buffalo 13, New York



The case of the curious man

The man above is one member of our Research team of 46. He's a curious man. Like the others on this team, he has an inquisitive mind, a virtue we encourage in research . . . one that prompts him to dig for facts, probe for values in today's market.

He's not just a man with a desk. His thirst for information takes him on industry field trips, top level staff meetings, and consultations with industrial executives.

He and his fellow researchers in our San Francisco, New York and Los Angeles offices comprise a highly versatile team. Their scope of knowledge covers cyclotrons and cyclical

industries . . . magnetrons and municipal bonds. They exercise the working journalist's rough-and-ready ability to boil down a mass of facts and figures into concise, interesting reading for you.

Experienced judgment helps them objectively analyze your portfolio of securities or the merits of underwriting a million dollar financing for a growing corporation.

This team is ready to work for you through our Account Advisors. If you'd like a sample of their work, write for a free copy of our current Review and Analysis. Address Department M.

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a logical combination in appetite control

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meprobamate with dextro-amphetamine sulfate LEDERLE

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meprobamate eases
tensions of dieting

▼
d-amphetamine
depresses appetite
and elevates mood

▼
...without
overstimulation
...without
insomnia
...without
barbiturate hangover

Each coated tablet (pink) contains:
d-amphetamine sulfate 5 mg.
meprobamate 400 mg.
Dosage: One tablet taken one-half
to one hour before each meal.



LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Skin Diving Is Not a Healthy Activity for Some Persons

Skin diving may look like an adventuresome activity, but for some persons it could be dangerous. According to an article in the August issue of *Today's Health*, published by the American Medical Association, some five million Americans are now taking the plunge into the world under water.

The article said that skin diving makes demands on the body which are unlike those met in everyday life. For this reason it is unsuitable for persons with certain types of disorders:

—Navigating under water requires heavy exer-

tion and those with respiratory problems or heart and blood vessel disease should not attempt it.

—Because of pressure changes which the skin diver will encounter, the ears and sinuses must be in good condition and able to equalize pressure.

—A perforated eardrum means that water will almost certainly enter the middle ear and diving should be ruled out. Ear plugs are no help in this case since they are for surface swimming only and should not be used for diving; water pressure would cause ear pain and possible injury.

The mental attitude of some persons can make

(Continued on Page 26)

Twin Pines NEUROPSYCHIATRIC SANITARIUM

OPEN, VISITING AND CONSULTING STAFF

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In-patient services for acute and chronic emotional illnesses.

Electric shock Insulin shock
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INTENSIVE POSTGRADUATE COURSES

STARTING DATES—WINTER, 1959-1960

SURGERY

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|--------------------------------|----------------------------|
| Surgical Technic..... | Two Weeks, Nov. 30, Feb. 1 |
| Surgery of Colon & Rectum..... | One Week, Nov. 30, Jan. 25 |
| General Surgery..... | Two Weeks, Dec. 7 |
| Blood Vessel Surgery..... | One Week, Nov. 30 |

GYNECOLOGY & OBSTETRICS

| | |
|---|--------------------|
| Vaginal Approach to Pelvic Surgery..... | One Week, Feb. 1 |
| Office & Operative Gynecology..... | Two Weeks, Feb. 9 |
| General & Surgical Obstetrics..... | Two Weeks, Feb. 22 |

UROLOGY

| | |
|--|----------------|
| Two-Week Intensive Course..... | April 22 |
| Ten-Day Practical Course in Cystoscopy | by appointment |

RADIOLOGY

| | |
|---------------------------|--------------------|
| Diagnostic Radiology..... | Two Weeks, Nov. 30 |
|---------------------------|--------------------|

TEACHING FACULTY:

Attending Staff of Cook County Hospital

ADDRESS:

REGISTRAR, 707 South Wood Street,
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VISTARIL

hydroxyzine
pamoate

ORAL SUSPENSION

restores tranquility: relieves pruritus

Simultaneously, Vistaril releases tension and relieves itching. Vistaril tranquilizes patients gently without impairing mental alertness.

In 1958, the A.M.A. Council on Drugs designated Vistaril as a psychotherapeutic antihistamine.

A Professional Information Booklet on Vistaril available on request.

Suggested oral dosage — adjust according to response:

Children over 6, 50-100 mg. daily in divided doses.

Children under 6, 50 mg. daily in divided doses.

Vistaril is supplied as **Oral Suspension** — 25 mg. per teaspoonful (5 cc.); 1 pint bottles.

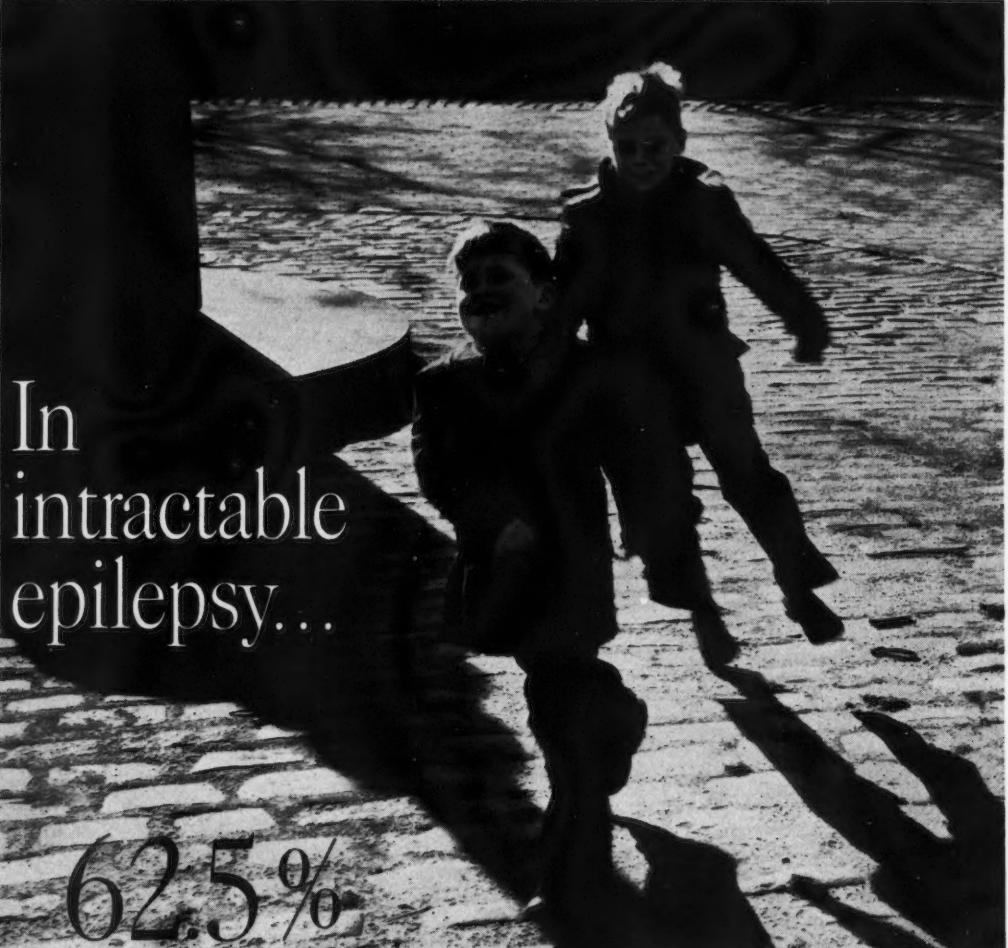
Capsules — 25, 50, and 100 mg.; bottles of 100 and 500.

Parenteral Solution (as the HCl) — 25 mg. per cc.; 10-cc. vials and 2-cc. Steraject® Cartridges.

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In
intractable
epilepsy...

62.5%
HAD
NO
MORE
SEIZURES¹

Until DIAMOX was added to the regimen, 56 epileptic children had proved refractory to standard anticonvulsant therapies. Then almost 80 per cent responded with striking decrease in frequency, number and severity of seizures of all types—with 35 cases in the complete remission group.

Control was usually prompt, with results often apparent within hours. Some cases were maintained seizure-free for as long as 20 months on DIAMOX.

Despite length of therapy and large dosages, side effects were few and not serious. However, desirable associated effects, such as improved disposition and increased mental capability, were noted in a number of cases.

Supplied: Scored tablets of 250 mg.

DIAMOX®



1. Holowach, J., and Thurston, D. L.: *J. Pediat.* 53:160, 1958. Acetazolamide Lederle

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THE FIRST DROP

for the first few days of life
VI-PENTA #1—vitamins K-E-C to protect against hemorrhagic and metabolic disorders in premature and full-term infants.

Each 0.6 cc contains vitamins: K* (analog)—1 mg; E (*dl-a*-tocopheryl acetate)—5 mg; C—25 mg.

*Synkayvite® Sodium Diphosphate—brand of menadiol sodium diphosphate

for infants and young children
VI-PENTA #2—vitamins A-D-C-E to assure optimal development and normal growth during the first few years of life.

Each 0.6 cc contains vitamins: A (synthetic)—5000 U.S.P. units; D₂—1000 U.S.P. units; C—50 mg; E (*dl-a*-tocopheryl acetate)—2 mg.

starts
the habit
of good
health

for children and adolescents
VI-PENTA #3—vitamins A-D-C-E plus six essential B-complex factors to meet greater nutritional demand in the maturing years.

Each 0.6 cc contains vitamins: A (synthetic)—5000 U.S.P. units; D₂—1000 U.S.P. units; B₁ hydrochloride—1 mg; Riboflavin (as Riboflavin-5'-phosphate sodium)—1 mg; B₆—1 mg; *d*-Panthenol (equiv. to 11.6 mg *d*-Ca pantothenate)—10 mg; Niacinamide—10 mg; C—50 mg; *d*-Biotin—30 mcg; E (*dl-a*-tocopheryl acetate)—2 mg.

Just 0.6 cc of each Vi-Penta Drops formula provides generous daily supplementation. May be given directly from the dropper or added to food or beverage.

With the first Vi-Penta Drop, you start day-old patients on the road to good health—and, by meeting "growing" vitamin needs with specific Vi-Penta formulations, you can continue to build a solid foundation for normal growth.

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GENERAL PRACTITIONERS AND SPECIALISTS—See us for the many EXCEPTIONAL OPPORTUNITIES available in San Francisco, East Bay, Peninsula and throughout California, including associations and partnerships with established groups and individual physicians; starting salaries \$1000.00 per month and up. For further information please contact Norma Rohl, Director, THE MEDICAL CENTER AGENCY, Flood Building, Suite 412-414, 870 Market Street, San Francisco 2. CALL YUKon 2-3412.

WANTED—DOCTORS, desperately, for beautiful new medical building in San Francisco Bay Area near 25-million-dollar shopping center. Very reasonable rent on sliding lease. Box 95,050, California Medicine.

GENERAL PRACTITIONER for small, new community (not government) hospital on Hoopa Indian Reservation. Preventive medical program similar to Peckham Experiment. Group practice, prepayment plan, opportunity for educational leave. Write or telephone Richard Ricklefs, M.D., Community Health Association, Hoopa, California.

GENERAL SURGEON who will also accept general practice for small, new community (not government) hospital on Hoopa Indian Reservation. Preventive medical program similar to Peckham Experiment. Group practice, prepayment plan, opportunity for educational leave. Write or telephone Richard Ricklefs, M.D., Community Health Association, Hoopa, California.

WANTED: GENERALISTS AND SPECIALISTS. California licensed for clinics, associations and partnerships. We cover all areas of the State. Hospital facilities and housing checked for you. Information gladly. **CONTINENTAL-PACIFIC COAST MEDICAL BUREAU**, Agency, 430 North Camden Drive, Beverly Hills, California.

RADIOLOGIST—Clinic in Southern California Coastal Area (smog free) needs part-time Radiologist. Earnings from clinic practice estimated from \$8,000 to \$10,000 a year with opportunities to double same from work with other physicians and groups in area. Arrangement can lead to clinic partnership and profit sharing. Box 95,135, California Medicine.

WANTED: Staff Physician for 150-bed General Hospital. Experienced and willing to do general practice. Salary open, vacation, sick leave, retirement. Must have California license. Apply to Personnel Officer, Cour House Annex, Madera, California.

STAFF PHYSICIAN NEEDED—60 active beds; \$862 per month, with housing. California license required. Write: Medical Director, Solano County Hospital, Fairfield, California.

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BOARD ELIGIBLE DERMATOLOGIST JUNE, desires information full or part time association with group or dermatologist, or opportunity for private practice. J. S. Maliner, 1220½ South Saltair Avenue, Los Angeles 25, California.

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OBSTETRICIAN-GYNECOLOGIST, 34, Board Eligible, Veteran, private practice experience, desires association with group, or individual, or possible location for solo. Box 95,155, California Medicine.

SURGEON—BOARD CERTIFIED, completing Thoracic and Cardiovascular training, including open heart surgery, in June, 1960, desires association with group, hospital, or established surgeon. Will consider active combination thoracic-cardiovascular and general surgery. Prefer coastal or mountain area. California license. Box 95,160, California Medicine.

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(Continued in Back Advertising Section, Page 82)

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Doriden offers sound, restful sleep for patients who are sensitive to barbiturates, elderly patients, patients with low vital capacity and poor respiratory reserve and those who are unable to use barbiturates because of hepatic or renal disease. Onset of sleep with Doriden is smooth and gradual, usually with no preliminary excitation. Doriden acts within 30 minutes, and sleep lasts for 4 to 8 hours. Except in rare cases, no "hangover" or "fog," because Doriden is rapidly metabolized. SUPPLIED: Tablets, 0.5 Gm., 0.25 Gm. and 0.125 Gm.

Doriden
(glutethimide CIBA)

CIBA
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for control of grand mal and psychomotor seizures

Dilantin®

KAPSEALS® "In the last 15 years several new anticonvulsant agents have come into clinical use but they have not replaced diphenylhydantoin [DILANTIN] as the most effective single agent for a variety of reasons. Most of them are less effective in control of seizures, have a greater sedative effect and higher incidence of sensitivity reactions."²

A drug of choice for control of grand mal and psychomotor seizures, DILANTIN sodium (diphenylhydantoin sodium, Parke-Davis) is available in several forms, including Kapseals of 0.03 Gm. and 0.1 Gm. supplied in bottles of 100 and 1,000.

IN EPILEPSY... PREREQUISITE FOR PARTICIPATION: THERAPY

With the use of medications, epileptic students may be enabled to participate in many of the same activities as other students.¹

REQUISITE FOR THERAPY: THE PARKE-DAVIS FAMILY OF ANTICONVULSANTS effective anticonvulsants for most clinical needs

Phelantin®

KAPSEALS When it has been demonstrated that the combination of Dilantin and phenobarbital is helpful in a patient and that these drugs are well tolerated, the use of PHELANTIN, a capsule providing both drugs, is often a great morale builder because it enables the physician to reduce the total number of pills or capsules the patient is required to take. It is less expensive medication and it prevents the patient from manipulating the dosage.³ PHELANTIN also contains methamphetamine (desoxyephedrine) to minimize the sedative effect of phenobarbital.

PHELANTIN kapseals (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.) are available in bottles of 100.

for the petit mal triad

Milontin®

KAPSEALS • SUSPENSION MILONTIN is one of the most effective agents for the treatment of petit mal epilepsy. Relatively free from untoward side effects, MILONTIN successfully reduces both the number and severity of petit mal attacks without increasing the frequency or severity of grand mal attacks in those patients with combined petit mal and grand mal epilepsy. Also, MILONTIN is considered an excellent choice for initiating therapy in untreated patients.⁴⁻⁶

MILONTIN kapseals (phenosuximide, Parke-Davis) 0.5 Gm., bottles of 100 and 1,000. Suspension, 250 mg. per 4 cc., 16-ounce bottles.

Celontin®

KAPSEALS CELONTIN is effective in the treatment of petit mal and psychomotor epilepsy. It provides effective control with a minimum of side effects, frequently checks seizures in patients refractory to other anticonvulsant medications, and does not tend to precipitate grand mal attacks in those patients with combined petit mal and grand mal seizures. For this reason, CELONTIN is useful in treating patients with more than one type of seizure and can be given in combination with Dilantin.⁷⁻¹⁰

CELONTIN kapseals (methylsuximide, Parke-Davis) 0.3 Gm., bottles of 100.

bibliography: (1) Green, J. R., & Steelman, H. F.: *Epileptic Seizures*, Baltimore, Williams & Wilkins Company, 1956, p. 136. (2) Bray, P. F.: *Pediatrics* 23:151, 1959. (3) Davidson, D. T., Jr., in Conn, H. F.: *Current Therapy* 1959, Philadelphia, W. B. Saunders Company, 1959, p. 512. (4) Smith, B., & Forster, F. M.: *Neurology* 4:137, 1954. (5) Zimmerman, F. T.: *New York Med.* 55:2338, 1955. (6) Lemiere, F.: *Northwest Med.* 53:482, 1954. (7) Perlstein, M. A.: *Pediatr. Clin. North America*: 4:1079 (Nov.) 1957. (8) Livingston, S., & Paull, L.: *Pediatrics* 17:119, 1957. (9) Carter, C. H., & Maley, M. C.: *Neurology* 7:483, 1957. (10) Keith, H. M., & Rustin, J. G.: *Proc. Staff Meet. Mayo Clin.* 33:105, 1958.



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GERALIN—the  one-capsule-daily comprehensive dietary supplement: for older patients at a savings they'll appreciate! vitamins...minerals...lipotropics...amino acids...bioflavonoids

One Geralin capsule contains: Vitamin A, 5,000 U.S.P. Units; Vitamin D, 500 U.S.P. Units; Thiamine Mononitrate, 5 mg.; Riboflavin, 2.5 mg.; Niacin, 15 mg.; Ascorbic Acid, 50 mg.; Pyridoxine HCl, 5 mg.; Calcium Pantothenate, 5 mg.; Folic Acid, .1 mg.; Vitamin E (from d-alpha Tocopherol Acetate Conc.), 5 I.U.; Vitamin B₁₂, 2 mcg.; Intrinsic Factor Conc. (with Vitamin B₁₂), .1 Unit; Calcium (as CaHPO₄), 135 mg.; Phosphorus (as CaHPO₄), 105 mg.; Iron (as FeSO₄), 10 mg.; Cobalt (as CoSO₄), .05 mg.; Copper (as CuSO₄), .1 mg.; Zinc (as ZnSO₄), .1 mg.; Manganese (as MnSO₄), .1 mg.; Molybdenum (as Na₂MoO₄), .1 mg.; Magnesium (as MgSO₄), .25 mg.; Potassium (as K₂SO₄), 5 mg.; Iodine (as KI), .2 mg.; Fluorine (as NaF), .025 mg.; Choline Bitartrate, .50 mg.; Inositol, 12.5 mg.; Liver, whole, desic., 12.5 mg.; L-Glutamic Acid, 50 mg.; L-Lysine, 25 mg.; Citrus Bioflavonoids Complex, 25 mg.

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SITUATIONS WANTED

ANESTHESIOLOGIST—married, 29 years old, service commitment completed. Will finish residency in July, 1960, desires to practice in Northern California. For information please write Box 95,140, California Medicine.

BOARD ELIGIBLE DERMATOLOGIST JUNE, desires information full or part time association with group or dermatologist, or opportunity for private practice. J. S. Maliner, 1220½ South Saltair Avenue, Los Angeles 25, California.

ENT—RESIDENT TRAINED at the Cincinnati General Hospital with California license seeks association with otolaryngologist in the San Francisco Bay area beginning August, 1960. Box 95,165, California Medicine.

GYNECOLOGY-OBSTETRICS: Association desired, group or partnership. Age 29, married, no military obligation, available August 1, 1960. Training: University Minnesota Medical School, rotating internship Buffalo, New York, assistant residency Johns Hopkins, residency Stanford University. OB-GYN practice Air Force with certified chief, 1958-1960. Available personal interview 30 days' notice. Box 95,025, California Medicine.

FOR THE HIGHER CALIBER MEDICAL PERSONNEL—Our applicants are always carefully and thoroughly screened for the specific qualifications you request. THE MEDICAL CENTER AGENCY, Flood Building, Suite 412-414, 870 Market Street, San Francisco 2. CALL YUKON 2-3412.

INTERNIST, 32, Board Certified, desires association with group. Available immediately. Box 95,045, California Medicine.

OBSTETRICIAN-GYNECOLOGIST, 34, Board Eligible, Veteran, private practice experience, desires association with group, or individual, or possible location for solo. Box 95,155, California Medicine.

SURGEON—BOARD CERTIFIED, completing Thoracic and Cardiovascular training, including open heart surgery, in June, 1960, desires association with group, hospital, or established surgeon. Will consider active combination thoracic-cardiovascular and general surgery. Prefer coastal or mountain area. California license. Box 95,160, California Medicine.

UROLOGIST—California license, Board Eligible, married, four children, veteran, desires association with established urologist or group, available now. Box 94,795, California Medicine.

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(Continued in Back Advertising Section, Page 82)

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Skin Diving Is Not a Healthy Activity for Some Persons

(Continued from Page 20)

skin diving a hazardous business, the article continued. Swimmers who are reckless and think it's fun to take unnecessary chances, or those who panic in emergencies, are likely to be threats to themselves and their fellow divers.

If you intend to be a skin diver, the article suggests consulting a physician beforehand to determine your fitness for diving. It's a precaution that will pay safety dividends.

Hypnosis Cures Hiccups in Heart Attack Victim

A single hypnotic suggestion successfully cured an eight-day case of hiccups in a man recovering from a heart attack, two Philadelphia physicians have reported.

A serious complication of myocardial infarction, hiccups produce extreme exhaustion in the patient if they are prolonged, Drs. Gordon Bendersky and Martin Baren said.

A 55-year-old man developed hiccups 22 days after he had suffered a heart attack. After eight days

(Continued on Page 42)



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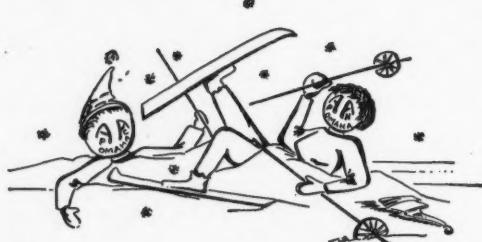
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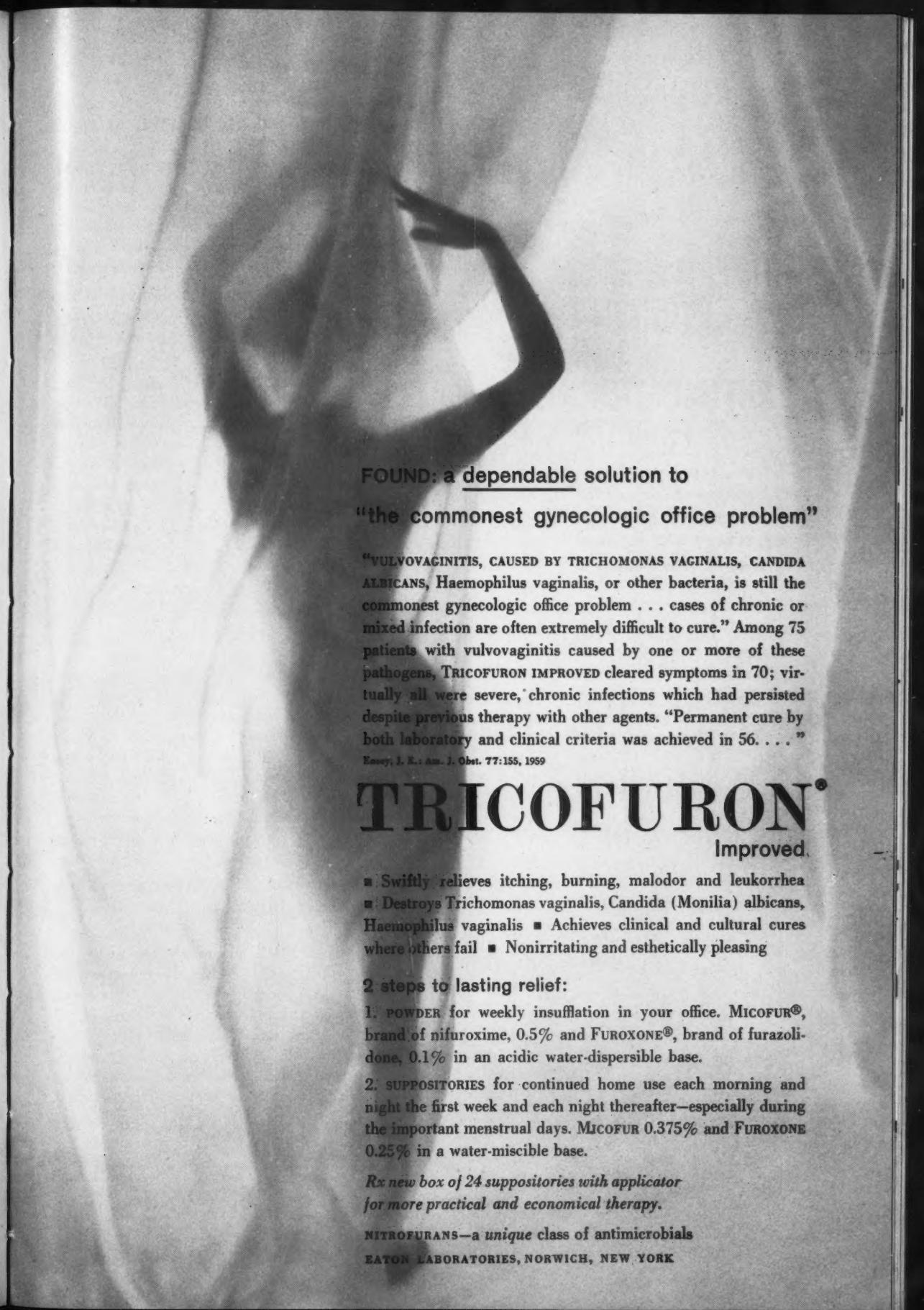


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Essary, J. R.: Am. J. Obst. 77:155, 1959

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MILONTIN Kapseals (phenoxsuximide, Parke-Davis) 0.5 Gm., bottles of 100 and 1,000. Suspension, 250 mg. per 4 cc., 16-ounce bottles.

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bibliography: (1) Green, J. R., & Steelman, H. F.: *Epileptic Seizures*, Baltimore, Williams & Wilkins Company, 1956, p. 136. (2) Bray, P. F.: *Pediatrics* 23:151, 1959. (3) Davidson, D. T., Jr., in Conn, H. F.: *Current Therapy* 1959, Philadelphia, W. B. Saunders Company, 1959, p. 512. (4) Smith, B., & Forster, F. M.: *Neurology* 4:137, 1954. (5) Zimmerman, F. T.: *New York J. Med.* 55:2338, 1955. (6) Lemiere, F.: *Northwest Med.* 53:482, 1954. (7) Perlstein, M. A.: *Pediatr. Clin. North America*: 4:1079 (Nov.) 1957. (8) Livingston, S., & Paull, L.: *Pediatrics* 19:414, 1957. (9) Carter, C. H., & Moley, M. C.: *Neurology* 7:483, 1957. (10) Keith, H. M., & Rush, J. G.: *Proc. Staff Meet. Mayo Clin.* 33:105, 1958.



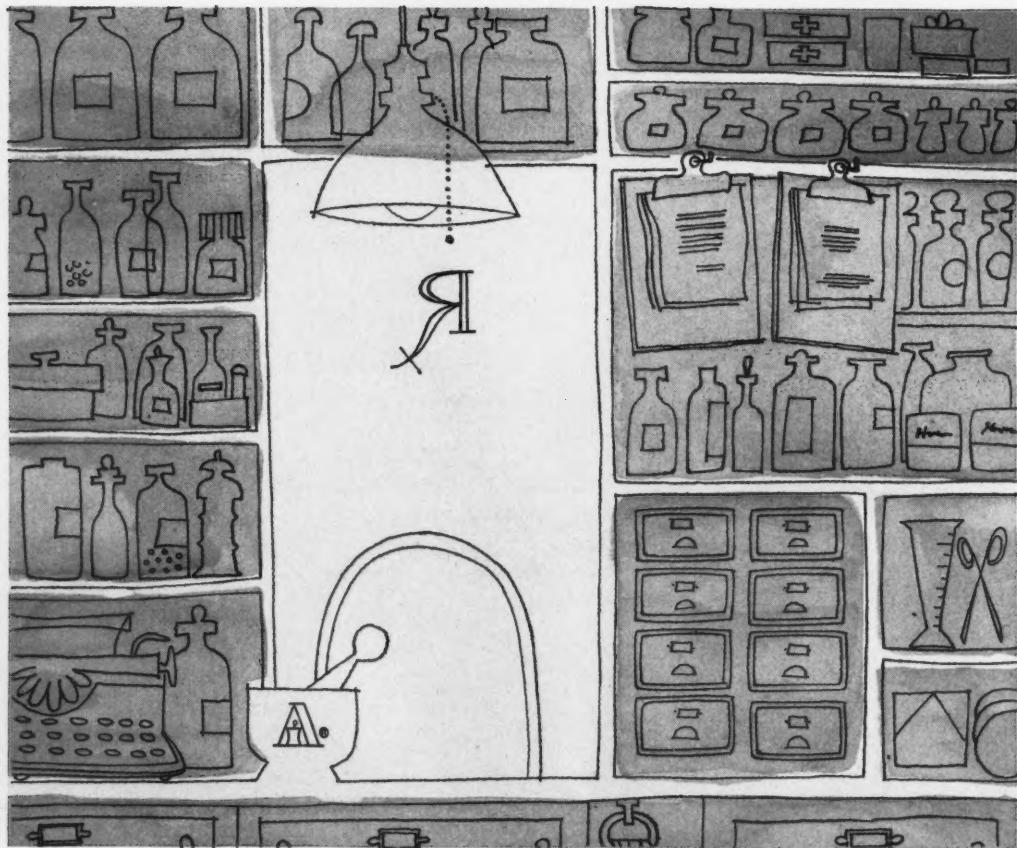
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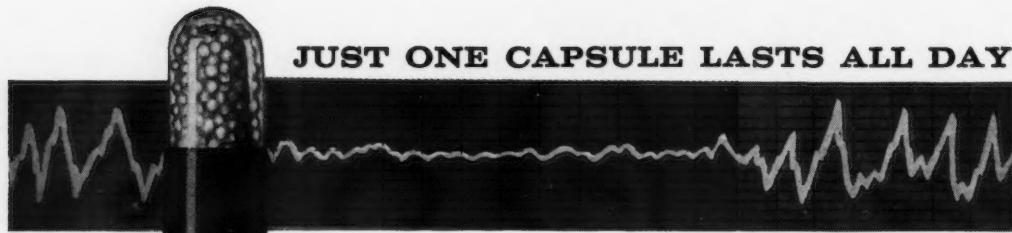
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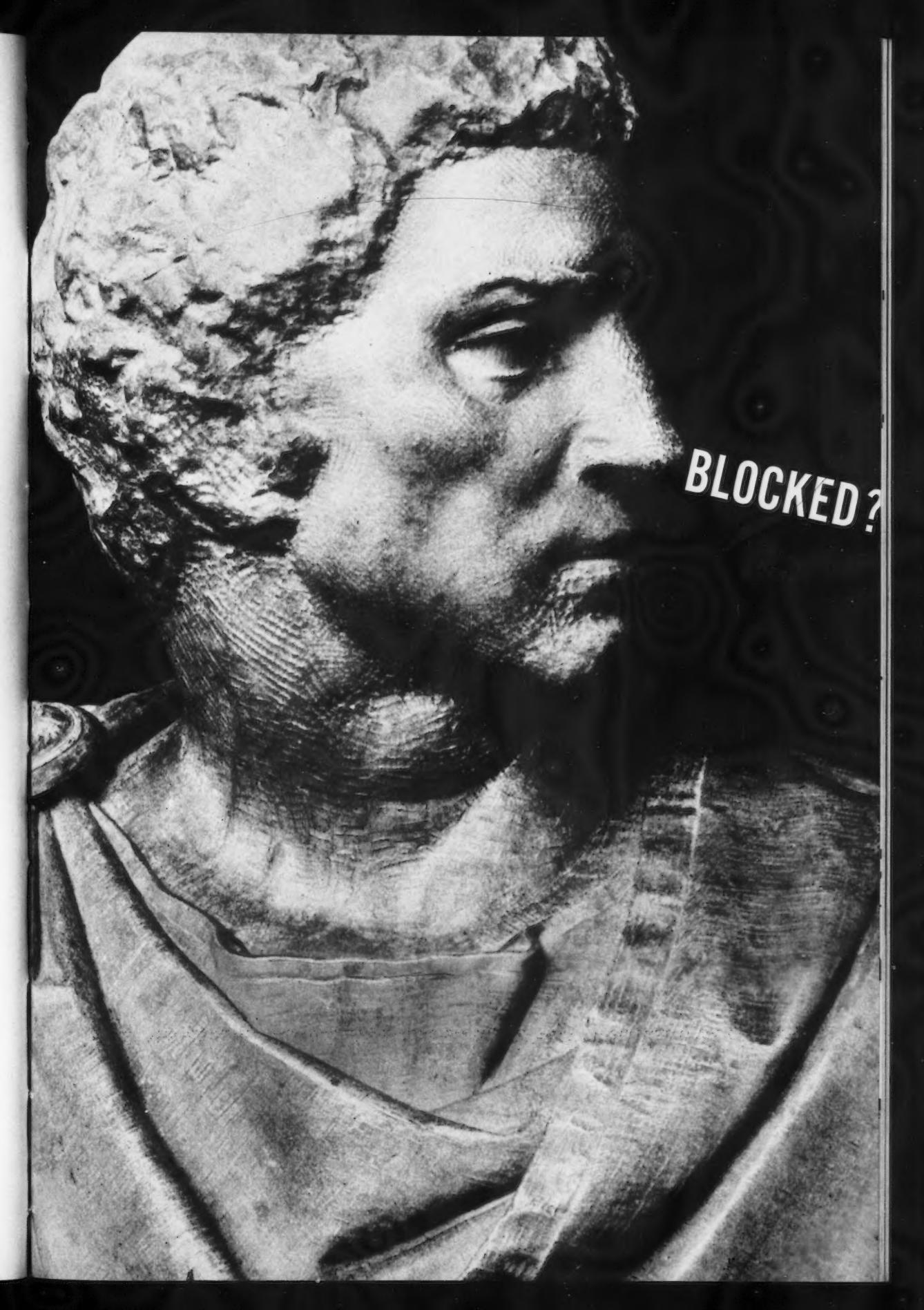
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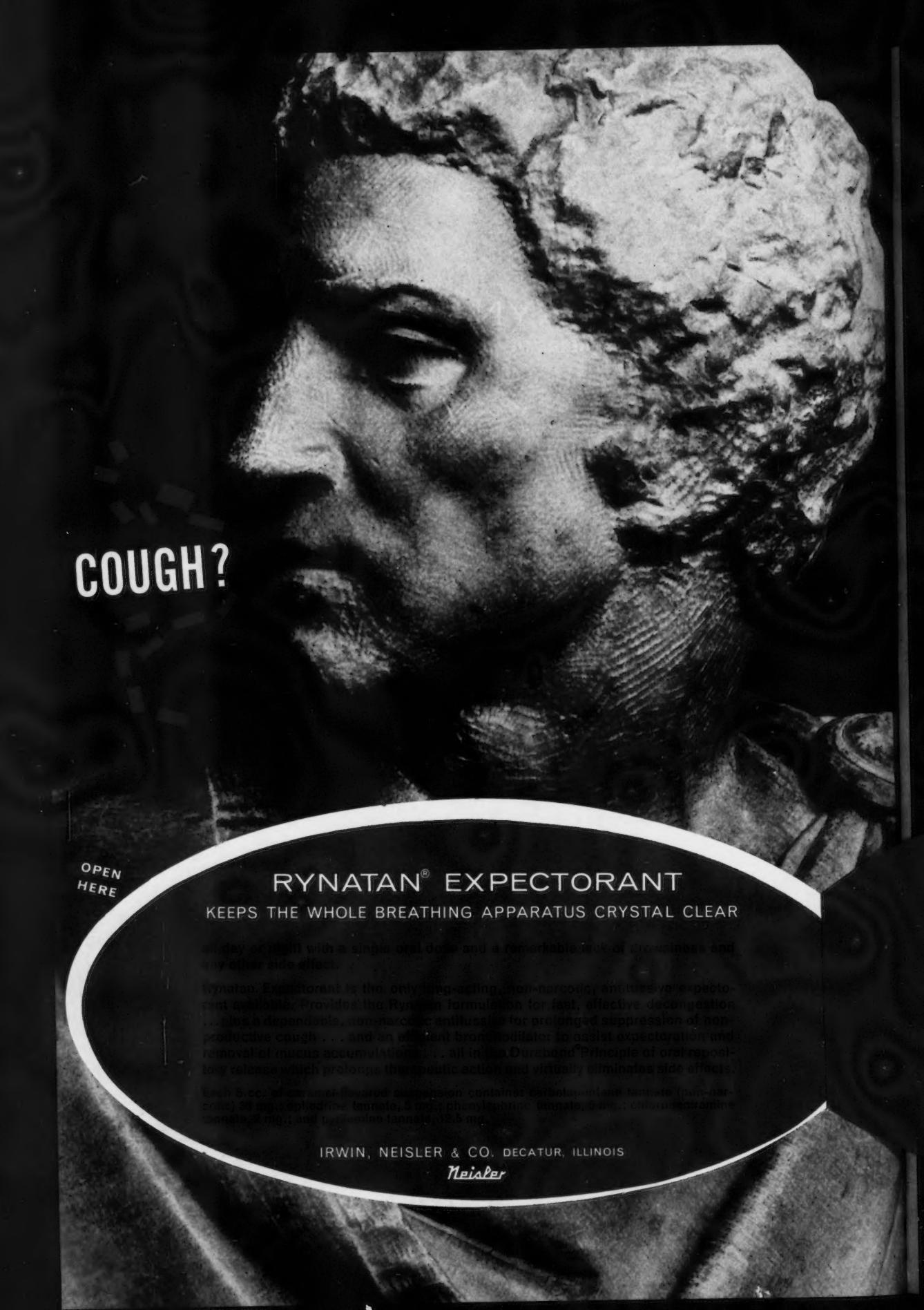
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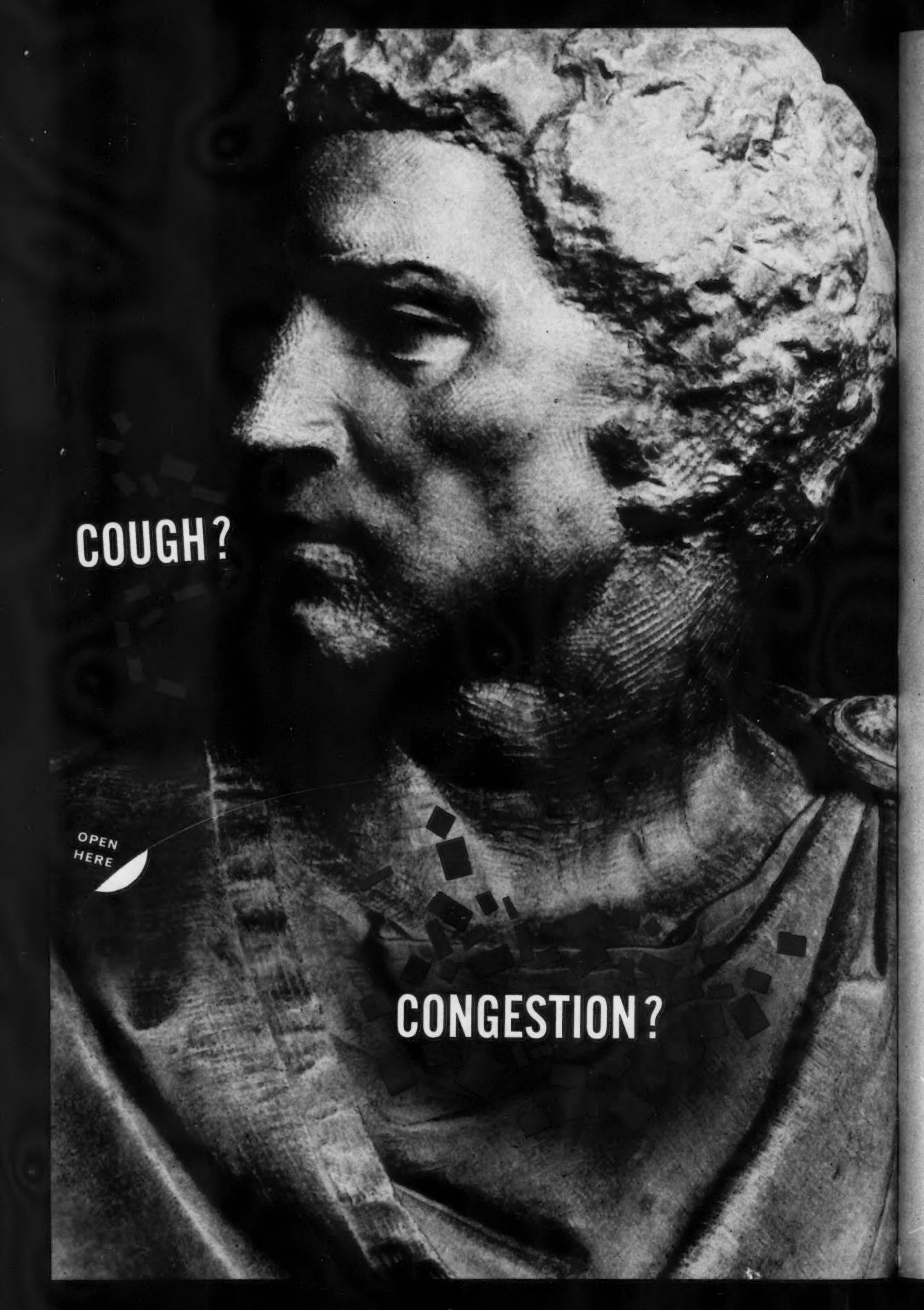
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References: 1. Farah, L.: Internat. Rec. Med. 169: 379 (June) 1956. 2. Over 200 laboratory and clinical papers from 14 countries.

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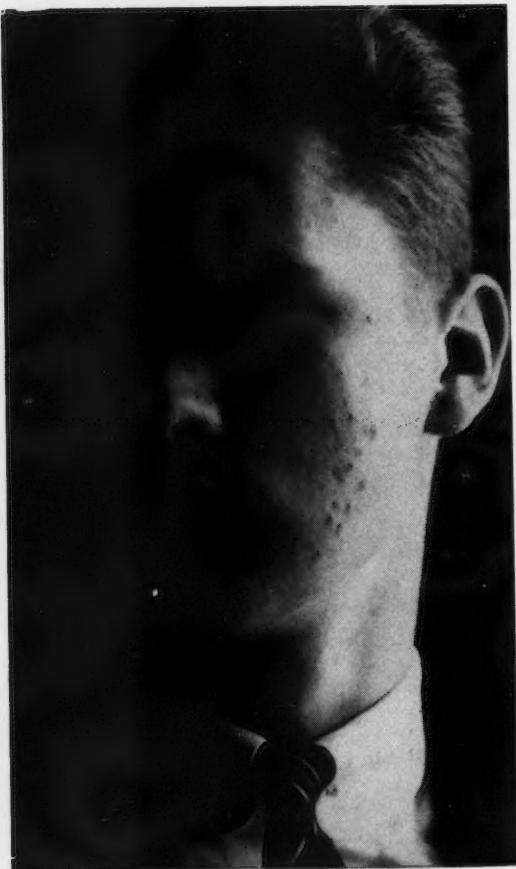
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1. Hodges, F.T.:
GP 14:86, Nov., 1956.

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Tinted Devices Declared Detimental to Night Driving

The use of any night driving lens or windshield, whether tinted, reflecting or polarizing, has been condemned by the Committee on Industrial Ophthalmology of the American Medical Association's Council on Industrial Health, according to its report in the October 17 issue of the *Journal of the American Medical Association*.

Its opinion is:

—That a night driving lens or windshield reduces the light transmitted to the eye, and actually makes seeing at night more difficult.

—That the source of night driving glare is the contrast between the headlights of oncoming cars and the darker surroundings. This contrast is not reduced by the use of tinted lenses or windshields. Instead, they really reduce the intensity of illumination from both the headlights and the surroundings. This impairs vision.

—That there is no scientific evidence to support any claim that the use of tinted lenses or windshields improves night vision.

Nurses' Professional Liability

The husband and three children of a patient who was in the hospital for the delivery of a child sued the doctor, the hospital, and the two nurses for her alleged wrongful death.

The evidence showed that the doctor, when the patient was about to deliver, had her removed to the delivery room. There he made an incision in her cervix to facilitate the delivery; a vein was severed and the cut was not sutured. This action was held by the jury to be in violation of the standard of medical care in the community.

The court said . . . conceding that the doctor was negligent, the failure of the nurses to take proper action could have contributed to the death of the patient. After the patient was returned to her room the nurses did not take the patient's pulse, blood pressure, temperature or respiration, and did not call the patient's doctor even when aware that the patient's bleeding was more than normal under the circumstances and despite the fact that the doctor's orders stated that he was to be called in such event. Although the nurse was "horrified" at the treatment which the doctor was giving, she did not notify hospital authorities of this fact. Thus, said the Court, there was sufficient evidence to support a finding that the nurses were negligent and the hospital would be liable thereof under the doctrine of *respondeat superior*.

—*Goff et al., v. Doctors General Hospital of San Jose et al.*, 9 Negligence Cases (2d) 311, (Cal. Dist. Ct. of Appeal, Third Dist., Dec. 17, 1958).

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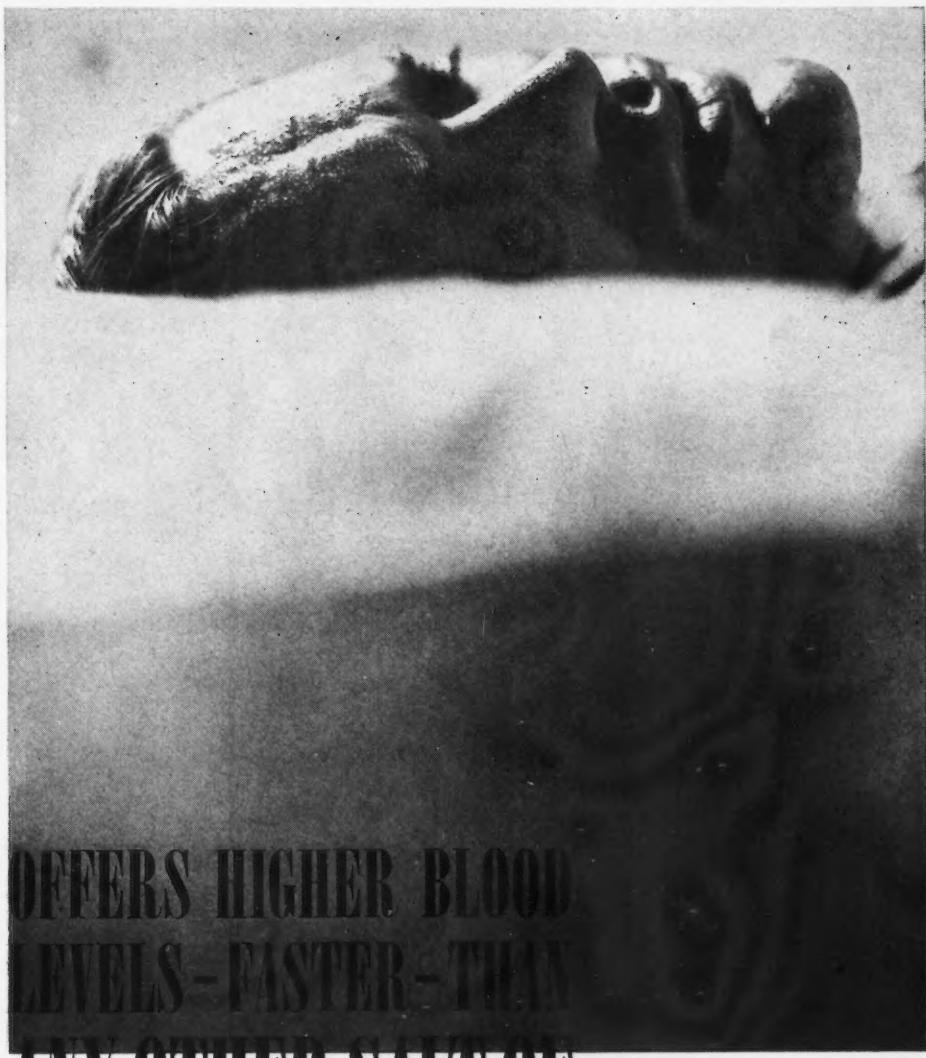
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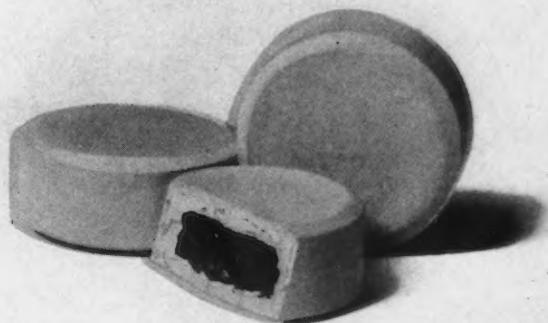
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... to unexcelled sulfa control of KYNEX. Lower dosage of just $\frac{1}{2}$ Gm. daily... prolonged action without hazard of crystalluria... reduced toxic potential... not surpassed by any other sulfa drug, singly or in combination. Dosage: Two tablets q.i.d. first day; one tablet q.i.d. thereafter. Each tablet contains: 125 mg. KYNEX in the shell with 150 mg. phenylazodiaminopyridine HCl in the core.

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*Response of 56-year-old female patient noted in clinical report to CIBA.

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POTENTIATED ANTIHYPERTENSIVE
FOR ADVANCING HYPERTENSION



Hypnosis Cures Hiccups in Heart Attack Victim

(Continued from Page 26)

of almost constant hiccuping, during which all the standard treatment methods were tried, the patient was given one hypnotic suggestion that the hiccups would disappear.

"This proved to be successful. Except for two hiccups which occurred several hours later, the hiccups failed to return. The remainder of his convalescence was uneventful," the physicians wrote in the September *Archives of Internal Medicine*, published by the American Medical Association.

No other case of successful termination of hiccups following a single hypnotic suggestion has been reported, the physicians said. While the general use

of hypnosis for eliminating psychosomatic manifestations cannot be endorsed and may be highly dangerous, they believe the seriousness of the hiccups and the failure of all other methods warranted its use.

Dr. Bendersky is associated with the Hahnemann Medical College and Hospital and Dr. Baren with Children's Hospital, Philadelphia.

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1. Bodi, T., and Levy, H.: Clinical report, cited with permission. 2. Wetzler, R. A., and Phillips, R. M.: Clinical report, cited with permission. 3. Prigot, A.: Clinical report, cited with permission. 4. Gosline, E., et al.: *Am. J. Psychiat.* 115:939 (April) 1959. 5. Turvey, S. E. C.: Clinical report, cited with permission.

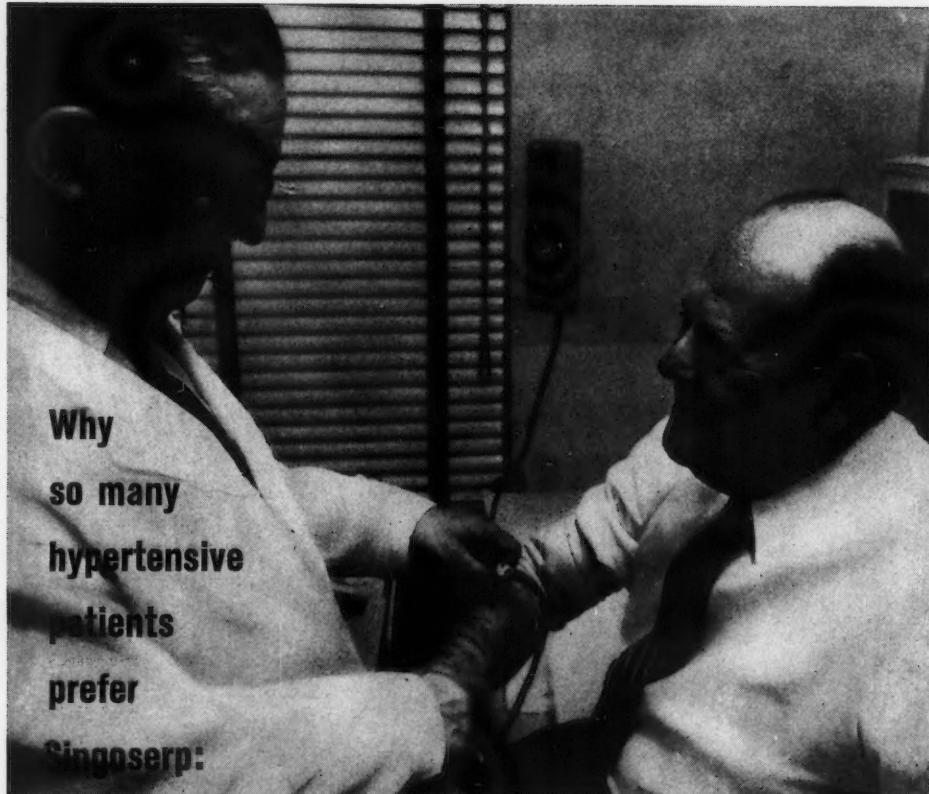
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*Herrmann, G. R., Vogelpohl, E. B., Hejtmancik, M. R., and Wright, J. C.: J.A.M.A. 169:1609 (April 4) 1959.



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Need for More Radiation Therapists Stressed

The picture of a cancer-fighting doctor with the most modern weapons of physics and the radiological sciences at his command has been drawn by two cancer specialists who urge more physicians to consider specializing in radiation therapy.

Radiation therapy should not be considered merely a technical service to be administered by someone who understands the production of x-rays but who has little knowledge or interest in the problems of cancer patients, stated Drs. John O. Archambeau and Orliss Wildermuth in the October 10 issue of the *Journal of the American Medical Association*. Rather, they said, radiation therapy is a clinical specialty, and the therapist is a clinician.

"At present," they added, "radiation therapy is in a vigorous growth period. Supervoltage machines, rotational therapy, and radioisotopes have increased its versatility and applications. Until a breakthrough occurs in the treatment of cancer, we can expect continued growth and usefulness of radiation therapy. It is an uncrowded specialty, with only about 100 full time practicing clinical therapists. The need

for therapists far exceeds their availability, and this lopsided situation is expected to continue."

Besides being familiar with the machinery and principles used in radiation therapy and having special knowledge of x-ray production and utilization, the radiotherapist also must be well acquainted with clinical diagnostic techniques and pathology, the physicians said. He not only uses the general examining methods common to all physicians, but he also works closely with other specialists in treating a cancer patient.

The American Board of Radiology issues a special certificate in radiation therapy. Training for a certificate includes a three-year period devoted to studying the application of ionizing radiations in the treatment of cancer patients, followed by a fourth year of practice or general training.

Financial help during residency is provided for eligible physicians by training fellowships from the National Cancer Institute and the American Cancer Society, the physicians stated.

Dr. Archambeau is a fellow of the National Cancer Institute; Dr. Wildermuth is with the Tumor Institute of Swedish Hospital, Seattle.

Rare Cases of Hallucinations

When one person has a hallucination, it is interesting, but not unusual. When three persons—members of the same family—have similar ones, it is rare and medicine takes notice.

The cases of two families, each with three members who had similar hallucinations, are reported by Dr. N. Lukianowicz, Barrow Hospital, Bristol, England, in the September issue of *Archives of General Psychiatry*, published by the American Medical Association.

Family A consisted of a brother and two sisters. The brother and one sister lived together, while their married sister lived down the street. Their mother died at age 72 after long suffering from an inoperable cancer and senile dementia.

Shortly after the mother's death, all three children began "seeing" their mother just before they fell asleep. The brother said, "Since my mother died, her apparition comes usually twice a week through the closed door of my bedroom and stops at the foot of my bed. She stands there for a while and stares at me." A sister said, "She would come in, right through the panels in the door, and then would stop at my bed and gaze."

They also reported "hearing" their mother call them by name during the day.

Their hallucinations continued until the brother entered a hospital for surgery.

Family B. consisted of a father, mother and daughter. They too experienced similar hallucina-

tions, although they also had individual ones. Father and mother were once awakened by a knocking at their bedroom door when no one was there. The mother told of waking and "seeing" her husband sitting at the foot of the bed with his head in his hands. She asked if he were ill and then realized that he wasn't there at all, but was sleeping beside her. The daughter had daytime auditory hallucinations.

The father suffered recurrent hallucinations during the daytime. He "felt" someone's hand resting on his shoulder. He explained, "I knew at once who it was. It was my father, for he always liked to put his hand on my shoulder when talking earnestly to me. I turned around, but there was no one there."

After the second such experience, he and his wife decided it was "a delayed shock" after his father's sudden death and that he must be "imagining things."

The hallucinations ended after Mr. B. underwent psychotherapy.

Dr. Lukianowicz explained that most of these experiences were connected with sleep—either occurring just before going to sleep or just after awakening. However, those that occurred during the day were probably "ordinary" or "genuine" hallucinations, similar to those occurring in psychotic states or during infections and illnesses.

In both families, the central theme of the phenomena was the figure of a deceased parent, for whose death their respective children held themselves responsible. It is assumed, Dr. Lukianowicz

(Continued on Page 52)



Striking relief
from **LOW BACK PAIN**
and **DYSMENORRHEA**

THE FIRST TRUE "TRANQUILAXANT"
Trancopal

Here is what you can expect when you prescribe

Case Profile*

A 28-year-old married woman, a secretary in a booking agency, complained of severe and consistent pain and cramps in the abdomen during her menstrual periods. Psychologically, she described the first two days as "climbing the walls." Menarche occurred at age 13. She has a regular twenty-eight day menstrual cycle and a four day menstrual period.

Trancopal was given in a dose of 100 mg. four times a day for the first two days of the four day period. In addition to the relief of the dysmenorrhea she also noticed disappearance of a "bloated feeling" that had previously annoyed her. She has now been treated with Trancopal for one and one-half years with excellent results. Other medication, such as codeine or aspirin with codeine, had relieved the pain, but the patient had had to stay home. Because her father is a physician, many commercial preparations had been tried prior to Trancopal, but no success had been achieved.

Before taking Trancopal this patient missed one day of work every month. For the past year and a half she has not missed a day because of dysmenorrhea.

for dysmenorrhea
and premenstrual tension



THE FIRST TRUE "TRANQUILAXANT"
Trancopal®

for low back pain



Case Profile*

A 42-year-old truck driver and mover injured his back while moving a piano. The pain radiated from the sacral region down to the region of the Achilles tendon on the right side. X-rays for ruptured disc revealed nothing pertinent. The day of the injury he was given Trancopal immediately after the physical examination. Although 100 to 200 mg. three times a day were prescribed, the patient on his own responsibility increased the dosage of Trancopal to 400 mg. three times a day. This dosage was continued for three days and then gradually reduced over a ten day period. During this time, the patient continued to drive his truck. The muscle spasm was completely controlled and no apparent side effects were noted.

For the past six months, the patient has continued to take Trancopal 100 to 200 mg. as needed for muscle spasm, particularly during strenuous days.

**Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.*

Turn page for complete listings of Indications and Dosage.

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potent MUSCLE RELAXANT

effective TRANQUILIZER

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- In anxiety and tension states, effective in 89 per cent of patients.¹
- Low incidence of side effects (2.3 per cent of patients). Blood pressure, pulse rate, respiration and digestive processes are unaffected by therapeutic dosage. It does not affect the hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications 1-6

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(lumbago, etc.)
Neck pain (torticollis)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disc syndrome

Fibrosis
Ankle sprain, tennis
elbow
Myositis
Postoperative muscle
spasm

Psychogenic:
Anxiety and tension
states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris
Alcoholism

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100 mg. (peach colored, scored), bottles of 100.

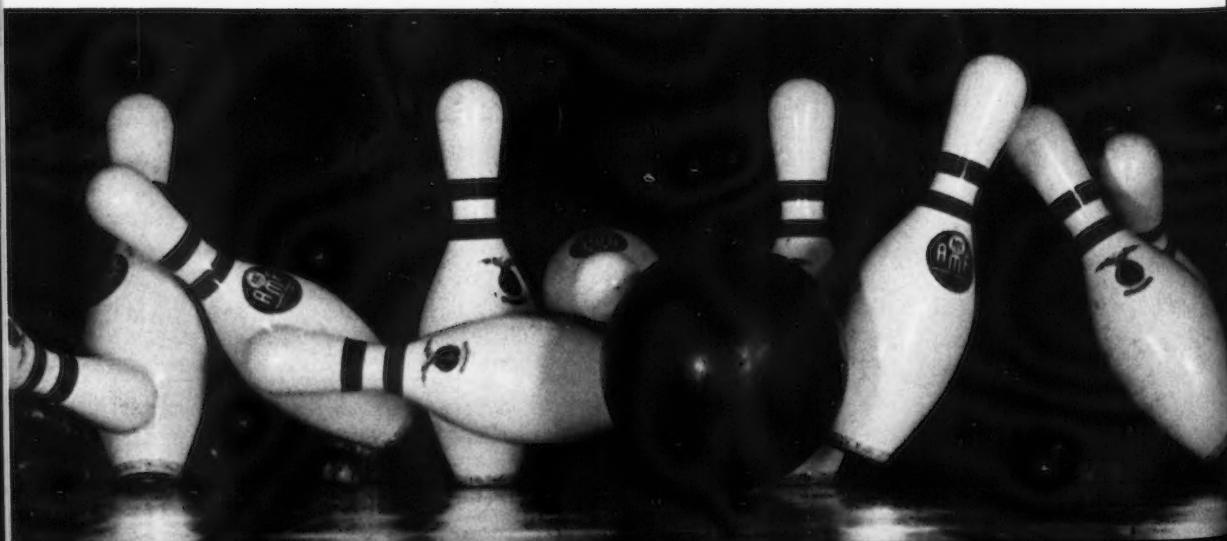
NEW STRENGTH ➤ Trancopal Caplets,
200 mg. (green colored, scored), bottles of 100.

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

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References: 1. Collective Study, Department of Medical Research, Winthrop Laboratories.
2. Lichtman, A. L.: New developments in muscle relaxant therapy, *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 3. Lichtman, A. L.: Relief of muscle spasm with a new central muscle relaxant, chlormezanone (Trancopal), Scientific Exhibit, Meeting of the International College of Surgeons, Miami Beach, Fla., Jan. 4-7, 1959. 4. Ganz, S. E.: Clinical evaluation of a new muscle relaxant (chlormethazanone), *J. Indiana M. A.* 52:1134, July, 1959. 5. Mullin, W. G., and Epifano, Leonard: Chlormezanone, a tranquilizing agent with potent skeletal muscle relaxant properties, *Am. Pract. Digest Treat.* 10:1743, Oct., 1959. 6. Shanahan, J. F.: Chlormezanone (Trancopal) in the treatment of dysmenorrhea; a preliminary report, *Current Therap. Res.* 1:59, Oct., 1959.

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FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the California Medical Association, February 21*-24, 1960, Los Angeles, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. **All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.**

Eighty-ninth Annual Session

CALIFORNIA MEDICAL ASSOCIATION

Los Angeles, California

FEBRUARY 21*-24, 1960

HOTEL ROOM RATES †

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| Garden Studios..... | 18.00-28.00 | 22.00-32.00 | 44.00-58.00 |
| CHAPMAN PARK HOTEL | | | |
| 3405 Wilshire Boulevard..... | 9.00-10.00 | 14.00 | 20.00 |
| Bungalows..... | | 16.00 | 25.00-40.00 |
| THE GAYLORD HOTEL | | | |
| 3355 Wilshire Boulevard..... | | 12.50 | 18.00 |
| HOTEL CHANCELLOR | | | |
| 3191 West Seventh Street..... | 9.00 | 12.00 | |
| SHERATON-WEST (formerly Sheraton-Town House) | | | |
| 2961 Wilshire Boulevard..... | 12.50-18.00 | 17.50-23.00 | 34.00 |

ALL RESERVATIONS MUST BE RECEIVED BEFORE: JANUARY 15, 1960

*February 20: House of Delegates will start with evening meeting Saturday, February 20.

†The above quoted rates are existing rates but are subject to any change which may be made in the future.

CALIFORNIA MEDICAL ASSOCIATION

693 Sutter Street

San Francisco 2, California

Please reserve the following accommodations for the 89th Annual Session of the California Medical Association, in Los Angeles February 21-24, 1960. (House of Delegates members: First meeting of House begins Saturday evening, February 20.)

Single Room \$..... Twin-Bedded Room \$.....

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First Choice Hotel..... Second Choice Hotel.....

ARRIVING AT HOTEL (date):..... Hour:..... A.M. P.M. { Hotel reservations will be held until

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THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

Individual Requesting Reservations—Please print or type

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for prompt and sustained relief from
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THORAZINE* SPANSULE† capsules

30 mg. 75 mg. 150 mg. 200 mg. 300 mg.



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Rare Cases of Hallucinations

(Continued from Page 48)

said, that these experiences were precipitated by fear and an anxious expectation of punishment.

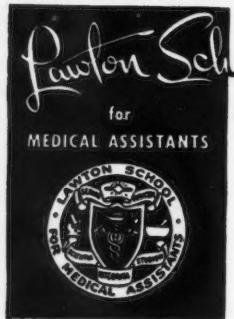
Mr. B. hated his father, the doctor said, and entertained death wishes against him. When the old man suddenly died, Mr. B. held himself responsible and expected punishment, probably from the hand of his deceased father. The hallucinated "hand" resting on his shoulder may symbolize the warning of the approaching revenge or it may be a sort of conditioned reflex, since the father had rested his hand on Mr. B's shoulder when disciplining him.

Family A.'s strikingly similar and uniform hallucinations are not surprising, since, being siblings, they represent a more homogeneous group than Family B., Dr. Lukianowicz said.

The causative factors of the A.'s hallucinations may be similar to those of Mr. B.'s. Old Mrs. A., apart from being physically very sick, was also suffering from a mental illness, and must have been extremely trying at times. Hence her children could not help developing some death wishes, which might even have had a certain "moral justification," the author said. She was obviously suffering and they

(Continued in Back Advertising Section, Page 62)

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| Over 50 pounds | 2 teaspoonfuls | |

In more severe infections, these dosages may be doubled.

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Food Radioactivity Research Must Be Continued

Radioactivity in food now presents no dangers, but research in the field must continue, especially as the peacetime use of nuclear energy increases, according to a Cornell University researcher.

In a report prepared for the American Medical Association's Council on Foods and Nutrition, appearing in the October 31 issue of the *Journal of the American Medical Association*, Cyril L. Comar, Ph.D., said environmental contamination now existing is due almost entirely to fall-out from nuclear weapons.

Eventually the contamination may be increased by such peacetime activities as mining of uranium and thorium ore and fuel processing; reactor installations in power plants, submarines, ships and aircraft, and radioisotopic applications in medicine, industry and agriculture.

The relative hazard of radioactive material is governed by several factors, Dr. Comar said. These include the amount released into the environment; the length of time the radioactivity lasts in certain materials; efficiency of transfer through the food chain to the human diet; the degree of absorption by the body, and the length of time the material is retained in the body.

According to these criteria, the radioisotopes from fall-out which are of the greatest concern are iodine, barium, strontium and cesium. Those of iodine and barium are relatively short-lived, while those of strontium and cesium retain their radioactivity for a long time.

Radioactive contaminants are transferred to man by specific pathways through the food chains, Dr. Comar said. For instance, barium-140 goes from the atmosphere to vegetation, to cattle, to milk, to man. Strontium, cesium and iodine have slightly more complicated pathways including soil and meat products.

The importance of the various pathways depends on many factors, such as the composition of the soil and the nature of plant cover. A heavy root mat will tend to trap fall-out strontium and delay its reaching the soil, while at the same time permitting absorption into the plant from the base of the stem.

The agricultural management of crops and livestock, which includes the plowing depth, fertilizer practice, and type of feeding employed, is another factor. It appears that the present contamination of diets originates mainly from surface contamination rather than from the soil reservoir.

This soil reservoir will be an increasingly important source of contamination, even if nuclear tests are stopped, Dr. Comar said. The present contamination will spread into the ground and persist there. This is especially true of strontium and

(Continued on Page 62)



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safely controls the "target symptoms" of
emotional stress with the smallest effective dosage
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virtually free from side effects at the
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a significantly wider spectrum of "target symptoms"
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onset of action is rapid; duration of effect is prolonged

***Neuroleptic**—"The term 'neuroleptic' implies a specific effect of a pharmacologic agent on the nervous system. It refers to a mode of action on affective tension that distinguishes this response from that to hypnotic drugs. The terms 'ataraxics' and 'tranquilizers' are descriptively impressive, but fail to convey what seems psychopharmacologically unique."¹

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"Fluphenazine (PERMITIL) the latest and most potent phenothiazine tranquilizer was administered from 3 to 20 months to 200 ambulatory and hospitalized patients representing a full spectrum of diagnostic classifications including psychosomatic disorders. Fractional doses of this drug rapidly produced improvement in 74% of these patients while causing a minimum of sedative, autonomic and endocrine effects which disappeared as treatment continued. . . . Patient acceptance of this compound was excellent because its prescription facilitated rather than interfered with the efficient performance of daily tasks. The physician who masters the art of fluphenazine use can treat a widened spectrum of target symptoms, safely and effectively."²



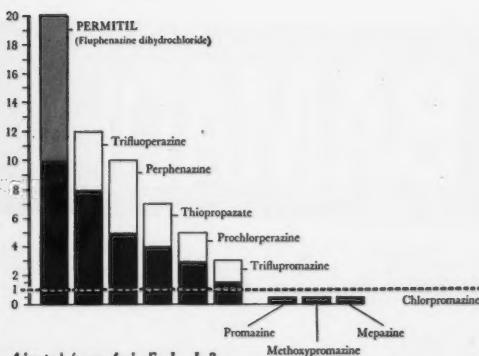
Now,
for the first time,
a phenothiazine
anti-anxiety agent
PERMITIL
designed specifically for
everyday office practice

A Factor to Consider in Phenothiazine Therapy

"The more potent the phenothiazine derivative the fewer the side effects it produces, because less of the chemical is needed to effect behavioral and therapeutic changes."²

The structure of PERMITIL has made it, on a mg. for mg. basis, "at least twice as potent as trifluoperazine, 3-5 times as potent as perphenazine and 10-20 times as potent as chlorpromazine, while increasing its speed and duration of action with a minimum of sedative, autonomic and endocrine side effects."²

**The Relative Therapeutic Potency
of Various Phenothiazines**



Adapted from Ayd, F. J., Jr.³

Permitil, as with other phenothiazines, is contraindicated in comatose or greatly depressed states resulting from central nervous system depressants.

Clinical Results with PERMITIL—a Phenothiazine
In one study² covering a two-year period, PERMITIL was prescribed for 200 patients who were disabled primarily by anxiety and its somatic, emotional, mental and behavioral effects.

"After 3 months of fluphenazine (PERMITIL) therapy, 74% or 148 of the 200 patients evaluated were improved. Of the 102 patients with a poor pretreatment prognosis, 69 improved, while 79 of the 98 patients with a good prognosis improved. Thus the therapeutic effectiveness of fluphenazine (PERMITIL) is somewhat better than that of other potent tranquilizers."²

The relatively minor somatic reactions occurred in the early weeks of treatment with doses above 2 mg. daily. They seldom required other medication to counteract them and disappeared as the maintenance dose was established. At dosage levels under 3 mg. a day, extrapyramidal side effects were minimal.

Prior to this study, 130 patients had urinalyses, hematologic studies (white blood count and differential), and liver function tests (cephalin flocculation, bilirubin direct and indirect, and alkaline phosphatase). These tests were repeated between 3 and 6 months in 50 patients, between 6 and 12 months in 50 patients and between 12 and 18 months in 30 patients. The minimum total dosage was 139 mg. Results of these tests disclosed that "fluphenazine (PERMITIL) administered over 3 to 18 months had no deleterious effect on the blood, liver or kidney in these patients."²

The Importance of PERMITIL in Everyday Practice

"In contrast to other phenothiazines, it (PERMITIL) mitigates apathy, indifference, inertia and anxiety-induced fatigue. Thus, instead of impeding effective performance of daily tasks, it increases efficiency by facilitating psychic relaxation. Consequently, acceptance of this drug, especially by office patients, has been excellent."²

How to Prescribe PERMITIL For most adults: One 0.25 mg. tablet b.i.d. (taken morning and afternoon). In refractory cases: Two 0.25 mg. tablets b.i.d. Total daily dosage in refractory cases should not exceed 2 mg., in divided doses. Dosage for children has not been established. *Complete information concerning the use of this drug is available on request.*

Available as Tablets, 0.25 mg., bottles of 50 and 500.

References: 1. Freyhan, F. A.: Psychopharmacology Frontiers, Boston, Little, Brown and Co., 1959, p. 7. 2. Ayd, F. J., Jr.: Fluphenazine: its spectrum of therapeutic application and clinical results in psychiatric patients, Current Therapeutic Research, 1:41 (Oct. 15) 1959. 3. Ayd, F. J., Jr.: The current status of major tranquilizers, in press.

WHITE LABORATORIES, INC.,
Kenilworth, New Jersey

Whites

Rare Cases of Hallucinations

(Continued from Front Advertising Section, Page 52)

only wished that the death might bring "a deliverance" to her from her misery. Nevertheless, when she died, they all felt guilty and responsible.

Thus the image of their dead mother became the kernel of their secret fears and the menacing content of their imagery. The hallucinations occurring before sleep might even be called "real nightmares." Mr. A.'s hallucinations disappeared after his surgery, perhaps because he felt the surgery to be a form of punishment.

Food Radioactivity Research Must Be Continued

(Continued from Page 58)

cesium, which retain their radioactivity for long periods.

Thus close checking of dietary levels of radio-isotopes and research to understand their possible effects on man must be continued indefinitely.

Dr. Comar is director of the laboratory of radiation biology in the department of physiology at New York State Veterinary College, Cornell University, Ithaca, New York.

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a
logical
combination
for
appetite suppression

meprobamate *plus* d-amphetamine

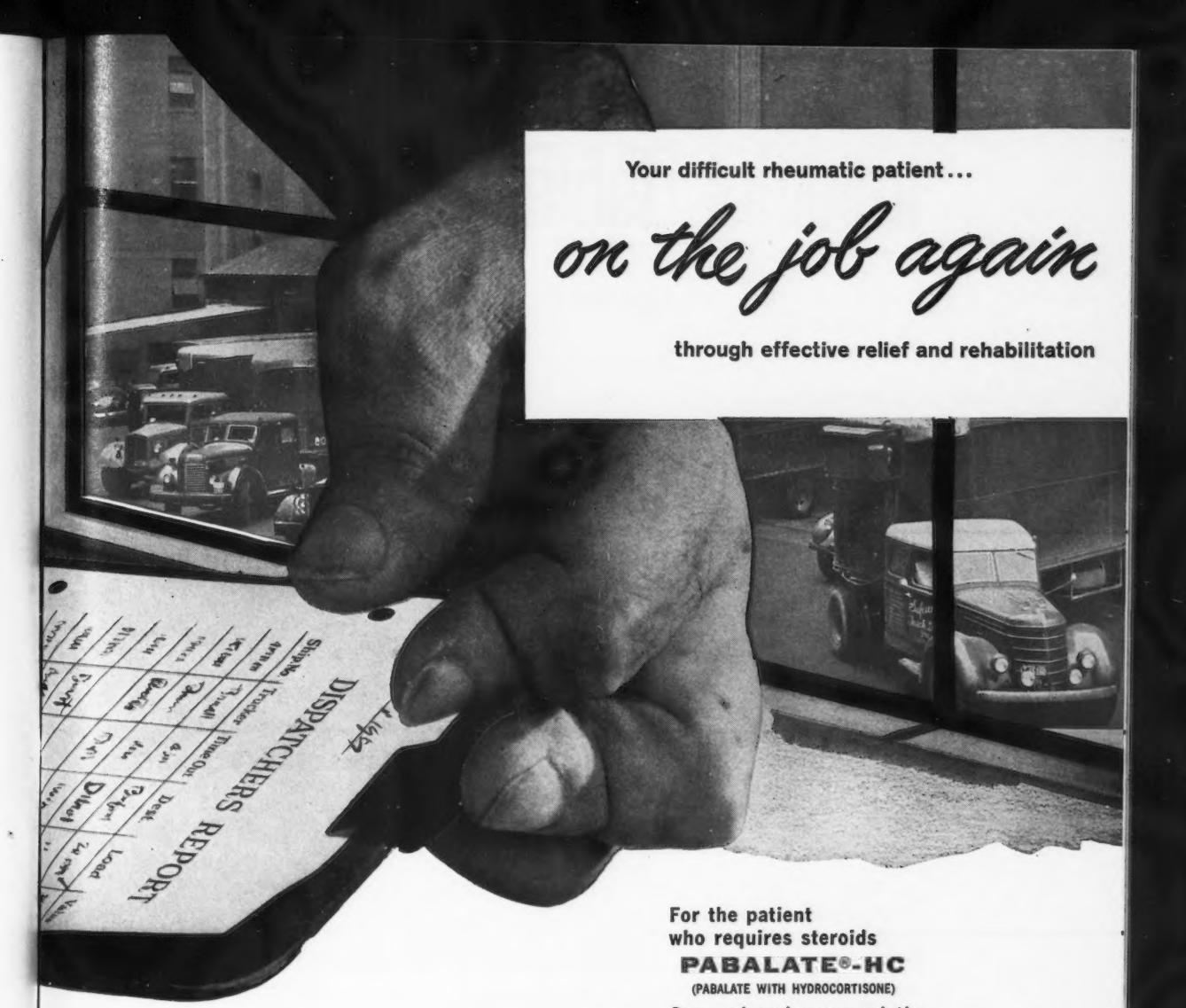
... suppresses appetite ... elevates mood
... reduces tension ... *without* insomnia,
overstimulation, or barbiturate hangover.



Each coated tablet (pink) contains: meprobamate, 400 mg.; d-amphetamine sulfate, 5 mg.
Dosage: One tablet one-half to one hour before each meal.



LEDERLE LABORATORIES
A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



Your difficult rheumatic patient...

on the job again

through effective relief and rehabilitation

For the patient
who requires steroids

PABALATE®-HC

(PABALATE WITH HYDROCORTISONE)

Comprehensive synergistic
combination of steroid and
nonsteroid antirheumatics...
full hormone effects on low
hormone dosage... satisfactory
remission of rheumatic
symptoms in 85% of patients
tested.

In each enteric-coated tablet:

Hydrocortisone (alcohol) 2.5 mg.
Potassium salicylate 0.3 Gm.
Potassium para-aminobenzoate. 0.3 Gm.
Ascorbic acid 50.0 mg.

For the patient who does not require steroids

PABALATE®

Reciprocally acting nonsteroid antirheumatics... more effective than salicylate alone.

In each enteric-coated tablet:

Sodium salicylate U.S.P. 0.3 Gm. (5 gr.)
Sodium para-aminobenzoate 0.3 Gm. (5 gr.)
Ascorbic acid 50.0 mg

or for the patient
who should avoid sodium

PABALATE®-Sodium Free®

Pabalate, with sodium salts
replaced by potassium salts.

In each enteric-coated tablet:

Potassium salicylate 0.3 Gm. (5 gr.)
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Ascorbic acid 50.0 mg.

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For steroid or non-steroid therapy: **SAFE DEPENDABLE ECONOMICAL**

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA • Ethical Pharmaceuticals of Merit since 1878

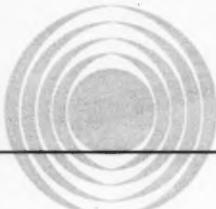
Tofrānil® a thymoleptic

brand of imipramine HCl

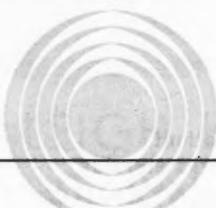
Specific in Depression

does

Produce remission or improvement in
70-85% of cases



Act effectively in all types of depression



Afford equally good results in severe
as in mild cases



Achieve therapeutic benefit with minimal risk of
serious side reaction



Indications for Tofrānil include:

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Availability: Tofrānil (brand of imipramine HCl) tablets of 25 mg, bottles of 100. Ampules of 25 mg. (for intramuscular administration only) cartons of 10 and 50.

.....not a MAO inhibitor

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Inhibit monoamine oxidase either in brain or liver with its associated risks

Produce dangerous potentiation of other drugs such as barbiturates and alcohol

Act by producing undesirable central nervous stimulation leading to agitation and excitement

Cause disturbance of color vision

The efficacy of Tofranil is attested by more than 50 published reports and confirmed by clinical experience in more than 50,000 cases.

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to prevent
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diaper rash



DESTITIN® OINTMENT

physically Desitin Ointment assures constant protection against the irritation of urine and excrement.

bacteriostatically it markedly inhibits ammonia-producing bacteria.

therapeutically Desitin Ointment soothes, lubricates—and stimulates healing by means of high grade cod liver oil, rich in vitamins A and D and unsaturated fatty acids.

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relief comes fast and comfortably

- does not produce autonomic side reactions
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Usual Dosage: One or two 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets or as MEPROTABS*—400 mg. unmarked, coated tablets.

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meprobamate (Wallace)



WALLACE LABORATORIES / New Brunswick, N. J.

CH-8284

Mental Health "Contagion" May Help World Peace

Physicians may some day be able to prevent family and community turmoil, to strike at greed and prejudice, and even perhaps help lay the foundation for world peace.

They may be able to do this because mental disease and mental health are just as "infectious" as a smile or the measles, according to an editorial in the September 12 issue of the *Journal of the American Medical Association*.

Although mental illness is as old as mankind, only recently have many physicians begun to view it as a disease—involving susceptibility and resistance factors—which is amenable to control through a broad program of preventive medicine.

Mental illness is now the only major public health problem that is not adequately reported, the editorial said. It then urged increased study of the cause and spread of mental illness and health and of techniques for preventing illness. Mental illness and health may well be the "epidemiology of the future," the editorial noted.

An accompanying "Medicine at Work" article noted that the seeds of communicability are "implanted in person-to-person contact, fertilized in the family to grow throughout the community, blown and sown from nation to nation. Contact might

communicate a fleeting thought or involve the transference of broad patterns of living."

The communicability of mental illness can range from that between a mother and child when the mother scolds and the child becomes anxious to that between nations which "breed dislike," the article said.

But health is also infectious, it said. "A child who is taught not to steal accepts this as a general idea, and it develops into a feeling—not just an understanding—that creates an iron-clad 'prejudice' against stealing."

To understand how all of this works and how the phenomenon of communicability can be used to help man toward better mental health must be the cooperative goal of physicians, psychologists, sociologists, teachers, anthropologists, and clergymen, the Journal editorial concluded.

HOTEL ROOMS FOR C.M.A. ANNUAL SESSION

February 21 to 24, 1960

PLEASE NOTE: The Ambassador Hotel will not guarantee sleeping rooms unless reserved before January 15, 1960. Make your reservations now. For hotel reservations, turn back to page 50, Advertising Section.

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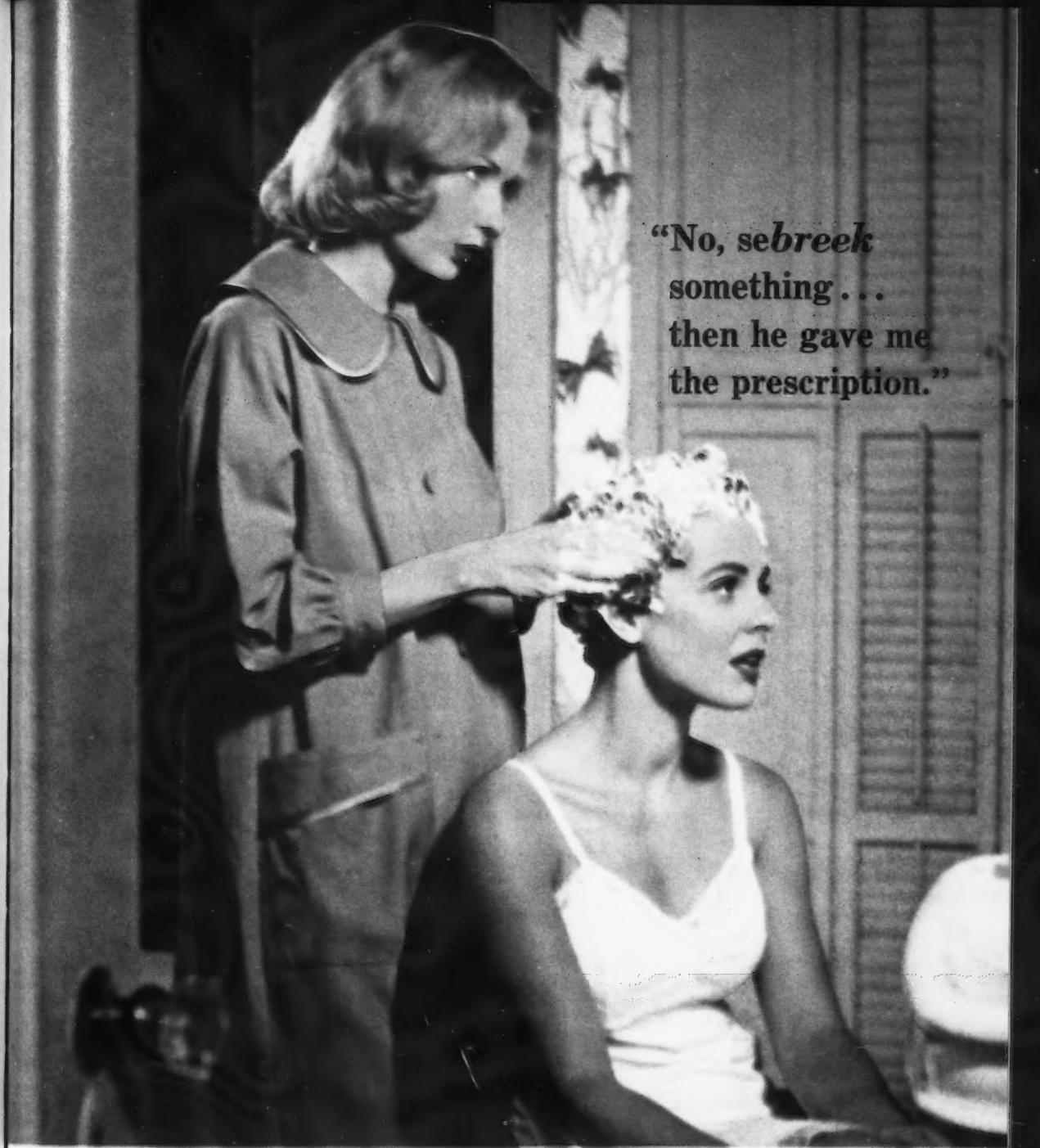
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**ABSTINENCE supported by
INDIFFERENCE TO ALCOHOLIC BEVERAGES, the return of
SELF-RESPECT and SELF-CONFIDENCE, results from
CONDITIONED RESPONSE THERAPY when properly applied**

Quoth the Raven

'NEVERMORE'





"No, sebreek
something...
then he gave me
the prescription."

Dermatitis, dear. **Seborrheic Dermatitis.** Now you know what dandruff really is. Good thing you mentioned it to your doctor. Most people plug along, trying everything in sight—lotions, tonics, pastes, shampoos, the works. They ought to know dandruff is a *medical* problem, needs a *medical* answer. Watch for the all too familiar signs, doctor. Your patients will appreciate the tip—and the prescription.

SELSUN®
SELENIUM SULFIDE SUSPENSION, ABBOTT

an ethical answer to a medical problem



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STANDING
THIS WAY OR
BUS STOP

ANEMIA
IN
ADVANCING
AGE

another indication for

Iberol

potent antianemia therapy
plus the complete B-complex

2 IBEROL FILMTABS A DAY SUPPLY.

The Right Amount of Iron

Iron Sulphate U.S.P.

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Thiamine U.S.P.

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Pyridoxine Hydrochloride U.S.P.

Calcium Pantothenate U.S.P.

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common denominator: a.p.

Worlds apart—plumber, pediatrician, press agent, counterman—these people have one thing in common: angina pectoris. Each one is receiving Peritrate 20 mg. q.i.d. as "basic therapy," providing long-acting coronary vasodilatation for fewer, less severe attacks, increased exercise tolerance, and reduced nitroglycerin dependence.

In one or another, however, underlying apprehensions, sudden stress situations, unpredictable daily schedules call for "basic therapy" plus individualized treatment. Broad coverage protection for each patient is afforded by a Peritrate formulation in terms of

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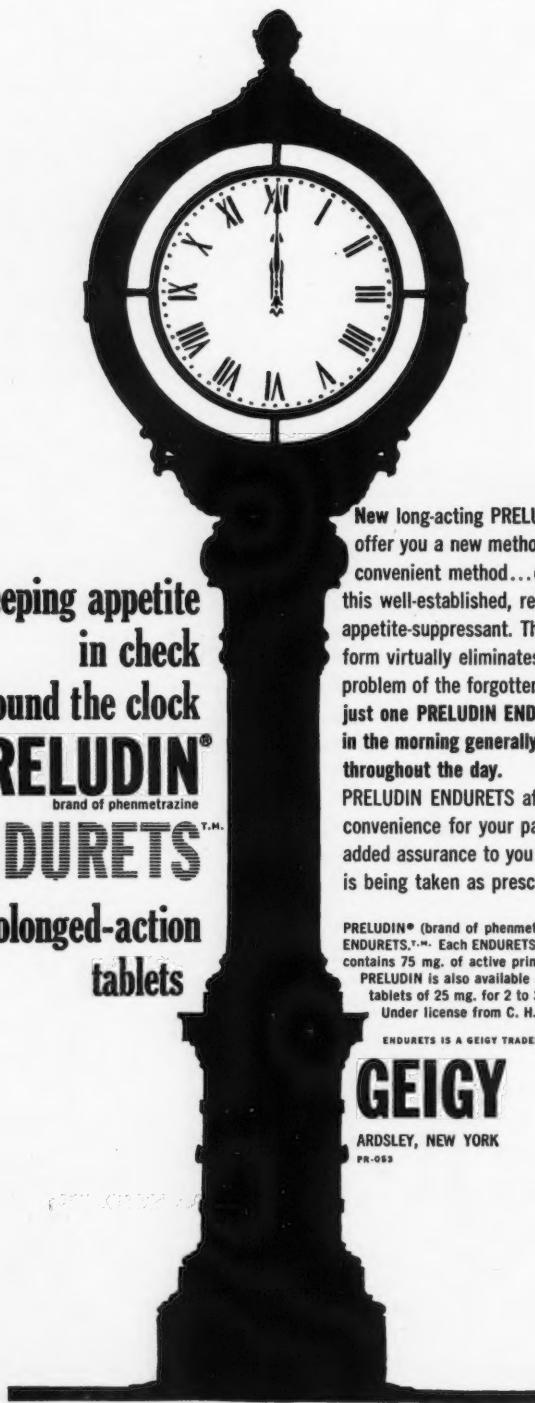
brand of pentaerythritol tetranitrate



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for the apprehensive patient
Peritrate (20 mg.) with Phenobarbital (15 mg.)

for congestive failure
Peritrate (10 mg.) with Aminophylline (100 mg.)
for convenient 24-hour protection
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to relieve the acute attack
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brand of phenmetrazine
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New long-acting PRELUDIN ENDURETS offer you a new method...a more convenient method...of administering this well-established, reliable appetite-suppressant. The new ENDURETS form virtually eliminates the vexing problem of the forgotten dose because... just one PRELUDIN ENDURET taken in the morning generally curbs the appetite throughout the day.

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PRELUDIN® (brand of phenmetrazine hydrochloride) ENDURETS, T.M. Each ENDURETS prolonged-action tablet contains 75 mg. of active principle.

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NICOZOL COMPLEX is a cerebral stimulant-tonic and dietary supplement intended for geriatric use. Improves mental and physical well-being. Improves protein and calcium metabolism. Indicated during convalescence, also as a preventive agent in common degenerative changes.

Dosage:

1 teaspoonful (5 cc) 3 times a day, preferably before meals. Female patients should follow each 21-day course with a 7-day rest interval.

Supply:

NICOZOL COMPLEX is available as a pleasant-tasting elixir. Popularly priced. Bottles of 1 pint and 1 gallon.

Write for professional sample and literature.



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| Each 15 cc (3 teaspoonfuls) contains: | |
| Pentylene tetrazol | 150 mg. |
| Niacin | 75 mg. |
| Methyl Testosterone | 2.5 mg. |
| Ethinyl Estradiol | 0.02 mg. |
| Thiamine Hydrochloride | 6 mg. |
| Riboflavin | 3 mg. |
| Pyridoxine Hydrochloride | 6 mg. |
| Vitamin B-12 | 2 mcg. |
| Folic Acid | 0.33 mg. |
| Panthenol | 5 mg. |
| Choline Bitartrate | 20 mg. |
| Inositol | 15 mg. |
| 1-Lysine Monohydrochloride | 100 mg. |
| Vitamin E (a-Tocopherol Acetate) | 3 mg. |
| Iron (as Ferric Pyrophosphate) | 15 mg. |
| Trace Minerals as: Iodine 0.05 mg., Magnesium 2 mg., Manganese 1 mg., Cobalt 0.1 mg., Zinc 1 mg. | |
| Contains 15% Alcohol | |



MAINSTAY OF RHEUMATOID ARTHRITIS

Plaquinil®

SULFATE

brand of hydroxychloroquine sulfate

New Long Term Chemotherapy of RHEUMATOID ARTHRITIS



"Whatever else may be needed from time to time in the management of individual cases, these drugs [Plaquinil and Aralen] should always be given a prolonged trial (at least six months) as the 'mainstay' of therapy."

Bagnall, A. W. (Univ. British Columbia, Vancouver, B.C.): A.M.A. Clinical Meeting (Scientific Section, Exhibit No. 124), Minneapolis, Minnesota, Dec. 2-5, 1958.

"The 4-aminoquinoline drugs (Plaquinil and Aralen) together with supplemental agents administered in nontoxic doses effectively maintained suppression of the disease in 83 per cent of 194 patients followed for 18 months."

Scherbel, A. L.; Harrison, J. W., and Atdjian, Martin: Cleveland Clin. Quart. 25:95, April, 1958.

"When used in tolerated dosage and over a sufficient period of time, there appears to be a tremendous therapeutic potential in the antimalarial drugs. . . . Plaquinil in this study did not have as many side effects as Aralen and thus appears to be a more practical compound."

Cramer, Quentin (Kansas City): Missouri Med. 55:1203, Nov., 1958.



S THERAPY

Plaquinil is the hydroxy derivative of Aralen® and is available as Plaquinil sulfate in tablets of 200 mg. (bottles of 100).

Average Dose:

INITIAL—400 to 600 mg. (1 tablet
2 or 3 times daily).

MAINTENANCE—200 to 400 mg. (1 or 2
tablets daily).

Plaquinil (brand of hydroxychloroquine) and Aralen (brand of chloroquine) trademarks reg. U.S. Pat. Off.

*Write for
Plaquinil booklet
discussing clinical
experience, dosage,
tolerance, precautions,
etc., in detail.*

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The Clinical Significance of a Lump in the Throat*

The sensation of a lump in the throat is a common complaint and is generally treated lightly, but to assume that it is purely functional without due examination in a given case is dangerous. The emotional lump in the throat is probably a spasm of the cricopharyngeus muscle, which is the lowermost portion of the m. constrictor pharyngis inferior and serves normally as the sphincter of the esophagus. The lump which moves up and down commonly represents the results of inflammation of the naso-

pharyngeal mucosa after influenza. The lump with aching is most often found in women and is associated with hypothyroidism. In the case presented, however, a lump that had been assumed at first to be functional in origin and later ascribed to chronic lingual tonsillitis, was ultimately found to be a squamous-cell carcinoma on the tongue at the level of the tip of the epiglottis. The discomfort connected with pharyngitis is not necessarily proportional to the extent of the pathological changes found on examination. The temptation to explain a lump in the throat as a form of neurosis should be resisted, and the physician should use all the means at his disposal to make a diagnosis and give appropriate treatment.

*Abstract from A.M.A. Arch. Otolaryng., 70:157-165, Aug. 1959, G. Edward Tremble.

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A patient accepted for treatment may remain under the supervision of his own physician if he so desires

a logical prescription for overweight patients

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... depresses appetite... elevates mood... eases tensions of dieting... without overstimulation, insomnia, or barbiturate hangover.

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Continuation with oral Cosa-Terramycin every six hours will provide highly effective antibacterial serum and tissue levels for prompt infection control.

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Supply:

*Terramycin Intramuscular Solution**

100 mg./2 cc. ampules

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125 mg. and 250 mg.

Cosa-Terramycin is also available as:

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Science for the world's well-being™

BOOKS RECEIVED

Books received by CALIFORNIA MEDICINE are acknowledged in this column. Selections will be made for more extensive review in the interests of readers as space permits.

ACUTE MEDICAL SYNDROMES AND EMERGENCIES, THE—Diagnosis and Treatment—Albert Salisbury Hyman, M.D., Associate Clinical Professor of Medicine, New York Medical College, New York, New York. With the collaboration of Samuel Weiss, M.D., Professor of Gastroenterology Emeritus, New York Polyclinic Medical School, New York, New York; George Guttmann Ornstein, M.D., Associate Clinical Professor of Medicine, New York Medical College, New York, New York; Howard F. Root, M.D., Medical Director, Joslin Clinic, Boston, Massachusetts; Anna Ruth Spiegelman, M.D., Assistant Professor Clinical Medicine, New York University Postgraduate Medical School, New York, New York; and Jack Abrey, M.D., Associate Attending Physician, New York City Hospital, Elmhurst, New York. Landsberger Medical Books, Inc., New York, New York, 1959. 442 pages, \$8.75.

ADOLESCENT AGGRESSION—A Study of the Influence of Child-Training Practices and Family Interrelationships. Albert Bandura, Stanford University, and Richard H. Walters, University of Toronto. Foreword by Robert R. Sears, Stanford University. The Ronald Press Company, 15 East 26th Street, New York 10, New York, 1959. 475 pages, \$7.50.

ANATOMY OF THE HUMAN BODY—27th Edition—by Henry Gray, F.R.S., Late Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School, London. Edited by Charles Mayo Goss, M.D., Managing Editor of the *Anatomical Record*; Professor of Anatomy, Louisiana State University School of Medicine, New Orleans, Louisiana. (Gray's Anatomy Centennial Edition—1859-1959). Lea & Febiger, Philadelphia, Pennsylvania, 1959. 1458 pages, \$17.50.

ATLAS AND MANUAL OF DERMATOLOGY AND VENEREOLOGY—Professor Dr. W. Burckhardt, Director of the Municipal Polyclinic for Skin and Venerous Diseases, Zurich, Switzerland. Translated and Edited by Stephan Epstein, M.D., Marshfield Clinic, Marshfield, Wisconsin; Clinical Associate Professor of Dermatology, University of Minnesota School of Medicine, Minneapolis, Minnesota. The Williams & Wilkins Company, Baltimore 2, Maryland, 1959. 276 pages, \$14.00.

BIOPSY MANUAL—James D. Hardy, M.D., Professor and Chairman of the Department of Surgery, University of Mississippi School of Medicine; James C. Griffin, Jr., M.D., Assistant Instructor in Surgery, Administrative Chief Resident in Surgery, National Cancer Institute Trainee, University of Mississippi School of Medicine; and Jorge A. Rodriguez, M.D., Assistant Professor of Surgical Anatomy, The Dept. of Surgery, University of Mississippi School of Medicine. W. B. Saunders Company, Philadelphia, Pennsylvania, 1959. 150 pages, \$6.50.

CIBA COLLECTION OF MEDICAL ILLUSTRATIONS, THE—Volume 3; Digestive System, Part 1, Upper Digestive Tract. Prepared by Frank H. Netter, M.D.; edited by Ernst Oppenheimer, M.D. Commissioned and published by Ciba, 1959. Copies may be obtained from the Publications Department, CIBA Pharmaceutical Products, Inc., Summit, New Jersey. 206 pages, \$12.50.

CIBA FOUNDATION STUDY GROUP No. 1—Pain and Itch, Nervous Mechanisms. In honor of Prof. Med. Dr. Y. Zotterman, M.D., R.V.O. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. Little, Brown and Company, 34 Beacon Street, Boston 6, Massachusetts, 1959. 120 pages, with 41 illustrations, \$2.50.

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CIGARETTE HABIT, THE: A Scientific Cure—Arthur King. Doubleday & Company, Inc., 575 Madison Avenue, New York 22, New York, 1959. 96 pages, \$2.00.

CLINICAL AUSCULTATION OF THE HEART—SECOND EDITION—with 660 Illustrations—by Samuel A. Levine, M.D., Sc.D. (Hon.), F.A.C.P., Clinical Professor of Medicine, Emeritus, Harvard Medical School; Consultant in Cardiology, Peter Bent Brigham Hospital, Boston; Consultant Cardiologist, Newton-Wellesley Hospital; Physician, New England Baptist Hospital; and W. Proctor Harvey, M.D., Associate Professor of Medicine, Georgetown University School of Medicine and Director, Division of Cardiology, Georgetown University Hospital; Consultant in Cardiology, Walter Reed Army Medical Center, Bethesda Naval Hospital. W. B. Saunders Company, Philadelphia, Pennsylvania, 1959. 657 pages, \$11.00.

DIAGNOSIS AND TREATMENT OF MENSTRUAL DISORDERS AND STERILITY—FOURTH EDITION—S. Leon Israel, M.D., Professor of Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania; Chief Gynecologist, Graduate Hospital, Gynecologist and Obstetrician, Pennsylvania Hospital, Philadelphia, Pennsylvania. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 3, New York, 1959. 666 pages, \$15.00.

DISTURBANCES IN GASTROINTESTINAL MOTILITY—edited by J. Alfred Rider, M.D., Ph.D., Assistant Professor of Medicine, University of California School of Medicine, San Francisco, California; and Hugo C. Moeller, M.D., Ph.D., Assistant Professor of Medicine, University of California School of Medicine, San Francisco, California. Charles C. Thomas, Publisher, Springfield, Illinois, 1959. 387 pages, \$13.00.

DOCTORS AND PATIENTS—Stories by Leading American Physicians—edited by Noah D. Fabricant, M.D., Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, New York, 1959. 204 pages, \$9.25.

EMERGENCY SYNDROMES IN PEDIATRIC PRACTICE, THE—Alfred J. Vignec, M.D., Clinical Professor of Pediatrics, New York University, College of Medicine, New York, New York; Medical Director and Pediatrician in Chief, New York Foundling Hospital, New York, New York; and Director of Pediatric Division, St. Vincent's Hospital, New York, New York. Landsberger Medical Books, Inc., 51 East 42nd Street, New York, New York, 1959. 382 pages, \$9.00.

EXPERIMENTAL SURGERY—Including Surgical Physiology—FOURTH EDITION—By J. Markowitz, M.B.E., M.B. (Tor.), Ph.D., M.S. in Exp. Surg. (Minn.); Professor of Physiology, University of Toronto; Visiting Professor of Physiology, Ontario Veterinary College, Guelph, Ont.; J. Archibald, D.V.M.M.V.Sc., Dr. Med. Vet. (Glessen), M.R.C.V.S., Professor & Head of the Division of Small Animal Medicine and Surgery, Ontario Veterinary College, Guelph, Ontario; and H. G. Downie, D.V.M., M.S. (Cornell), M.V.Sc., Professor & Head, Department of Physiological Sciences, Ontario Veterinary College, Guelph, Ontario. The Williams & Wilkins Company, Baltimore 2, Maryland, 1959. 931 pages, \$12.50.

FAMILY MEDICAL ENCYCLOPEDIA, THE—Justin J. Schifferes, Ph.D. (A Heath Education Council Book). (Originally published by Little, Brown & Company, Boston, 1959) Permabook Edition, Permabook, 630 Fifth Avenue, New York, New York, 1959. 619 pages, illustrated by Louise Bush, Ph.D., 50c.

FLUIDS OF PARENTERAL BODY CAVITIES, THE—Modern Medical Monographs—19—Paul D. Hoeprich, M.D., Assistant Professor of Medicine and Assistant Research Professor of Pathology, University of Utah College of Medicine, Salt Lake City, Utah; and John R. Ward, M.D., Assistant Professor of Medicine, University of Utah College of Medicine, Salt Lake City, Utah. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, New York, 1959. 98 pages, \$4.75.

GROWTH DIAGNOSIS—Selected Methods for Interpreting and Predicting Physical Development from One Year to Maturity. Leona M. Bayer, associate clinical professor of medicine at Stanford University School of Medicine, and Nancy Bayley, chief of the Section on Child Development, National Institute of Mental Health. The University of Chicago Press, 5750 Ellis Avenue, Chicago 37, Illinois, 1959. 241 pages, \$10.

(Continued on Page 90)



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Orbach, E. J.: J. Internat. Coll. Surgeons 31:165, 1959.

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Graham, W.: Canad. M.A.J. 79:634, (Oct. 15) 1958.

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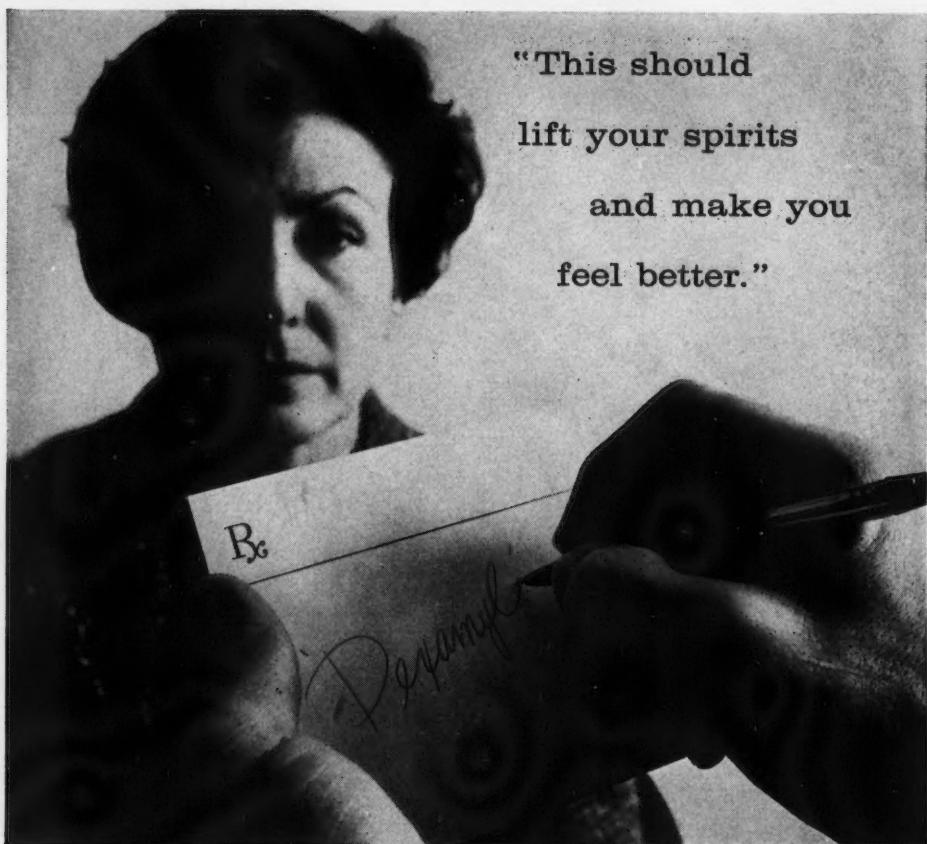
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¹ Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933.



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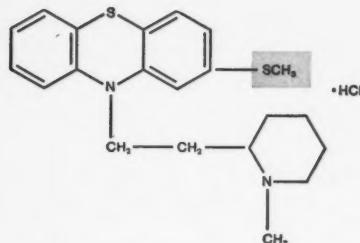
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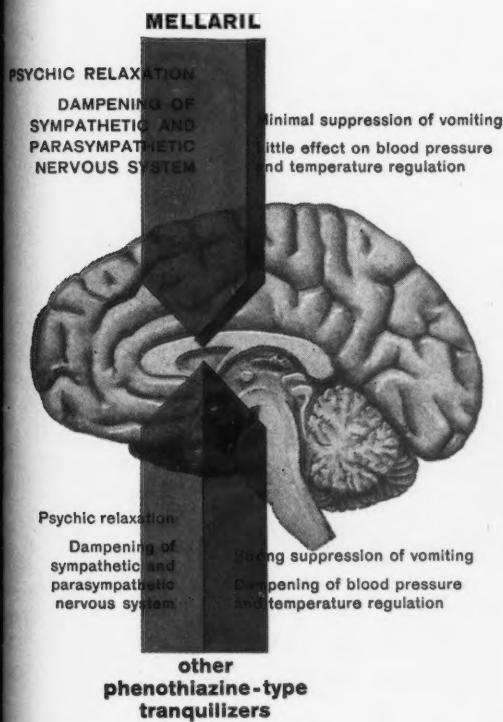
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*Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959



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(Continued from Front Advertising Section, Page 24)

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GILBERT MEDICAL CENTER, ANAHEIM. Medical suites for lease to: Pediatrician, Obstetrician-Gynecologist, Internist and Allergist. Leasing only one suite to each specialty. New building with suites individually heated and air-conditioned, located directly across street from hospital. Telephone TAylor 8-2460 collect, or write Gilbert Medical Center, 925 South Gilbert, #4, Anaheim, California.

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DOCTOR'S SUITE FOR RENT in San Diego, California. Excellent location. Reasonable rent includes fully equipped offices and nurse's service, if desired. Laboratory and X-ray available. Herbert Robbins, M.D., 1831 Fourth Avenue, San Diego 1, California. Telephone: BELmont 9-0121.

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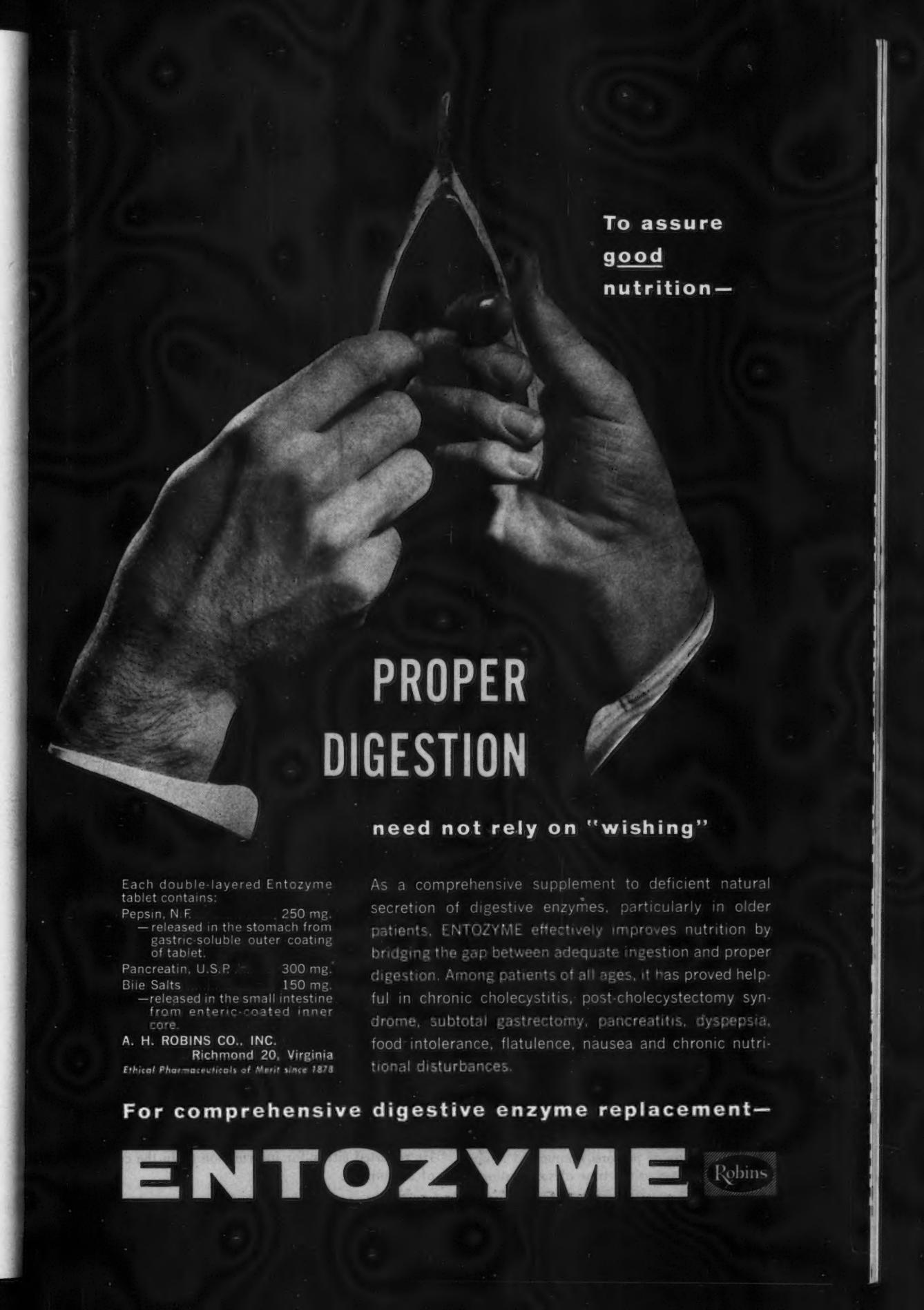
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As a comprehensive supplement to deficient natural secretion of digestive enzymes, particularly in older patients, ENTOZYME effectively improves nutrition by bridging the gap between adequate ingestion and proper digestion. Among patients of all ages, it has proved helpful in chronic cholecystitis, post-cholecystectomy syndrome, subtotal gastrectomy, pancreatitis, dyspepsia, food intolerance, flatulence, nausea and chronic nutritional disturbances.

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Treatment of Burns

The many ointments recommended for the treatment of major burns are of "little practical value," according to Dr. Isidor S. Ravdin, Philadelphia surgeon.

In a report prepared for the American Medical Association's Council on Drugs, Dr. Ravdin said, "In fact, many of the agents which have been used to promote healing have been shown to be detrimental to epithelialization."

"The only worthwhile place for a specialized burn ointment (if such an ointment exists) seems to be on a small superficial burn for the immediate relief of pain."

The best dressing for a serious burn is "still a fine-mesh gauze lightly impregnated with an innocuous bland ointment," according to Dr. Ravdin. However, the "open method of treatment," in which no dressing is used and the dried skin serves as the bandage, is gaining more and more acceptance.

Dr. Ravdin pointed out that antibiotics have little value in the local care of the burned wound; however, the general use of them to prevent overwhelming systemic infection is of great value. One of the most frequent causes of death in serious burns is from a late-developing general infection.

The use of cortisone and corticotropin has been

discontinued almost entirely, he said, since they have been proved to be of no use in speeding healing.

The best method of cleaning the burned area, if this is necessary, is still by washing with surgical soap and sterile water or a salt solution. The best way to remove foreign material and dead skin is still achieved by time on the surgeon's scalpel.

One of the most difficult problems in serious burns is the treatment of shock. This is handled by the giving of fluids—plasma, whole blood, water or salt solutions, usually intravenously.

Large quantities of salt are necessary in the early phase of treatment because of the rapid loss of sodium by the body. If the salt solution can be given orally, a weaker solution not only is better tolerated but also eliminates the necessity of giving extra water intravenously.

Local agents to control pain are no longer used. Gentleness in the care of the patient and early removal of dead skin, with early grafting of new skin, provide the best means of making the patient comfortable, he concluded.

Dr. Ravdin is professor of surgery at the Hospital of the University of Pennsylvania, and his report appeared in the November 7 issue of the *Journal of the American Medical Association*.

Salk Vaccine Reactions Are One in a Million

Reported reactions to Salk polio vaccine thus far are so low as to make it unique among immunizing agents, according to Dr. Charles N. Christensen, Indianapolis.

Writing in the October 17 issue of the *Journal of the American Medical Association*, Dr. Christensen, medical division of Lilly Research Laboratories, said there have been only 284 reaction complaints in connection with 184,000,000 doses of Eli Lilly and Company manufactured vaccine. Of these, only 146 could be called possibly significant—a complaint rate of 1 per 1,200,000 doses.

One hundred thirty-eight complaints were of burning or stinging pain on injection and were regarded as less significant.

In six instances a clinical picture resembling polio was recorded. Weakness in the extremities not diagnosed as polio was reported three times. In two patients it was transient. In the third case, an adult developed weakness in his left leg after a second injection and more severe weakness after a third injection.

Dr. Christensen stated that evaluation of polio possibly caused by the Salk vaccine is difficult, since some of the millions of persons immunized almost certainly were infected at the time of vaccination—

or they acquired infection soon after receiving the vaccine. He concluded, "It seems likely that cases of poliomyelitis which occurred after injections of the vaccine were coincidental to its use."

Nine cases of encephalitis were reported. In none of these were laboratory data available to identify the cause of the disease, according to the article.

Allergic reactions also were considered a potential hazard. But in 1954 when 7,507 children were test inoculated, only one instance of hives was encountered.

Penicillin also has been incriminated as a cause of allergic reactions after vaccination. It is impossible to omit antibiotics from the manufacture of Salk vaccine, Dr. Christensen noted, since they are essential to the prevention of bacterial contamination of the tissue culture. He pointed out that the incidence of allergic reactions has been so low, it has become difficult to determine if the vaccine itself was responsible. A very high degree of penicillin sensitivity would have to exist—a sensitivity so high that it is rarely found.

The one-in-a-million complaint figure is based on all complaints received from physicians, and in many cases the physician indicated he did not believe the reaction was related to the Salk vaccine. He reported either for information or in the course of an inquiry.

Q A

Why should I use
KANTREX® Injection*
when there are
so many other
antibiotics available?

Because KANTREX Injection is bactericidal to a wide variety of organisms, including many that are highly resistant to the other antibiotics^{3,4,10,12,13,17,18,20,21,23,24,25,27,30,33,35,37}

—organisms such as *Staph. aureus*, *Staph. albus*, *A. aerogenes*, *E. coli*, *H. pertussis*, *K. pneumoniae*, *Neisseria* sp., *Shigella*, *Salmonella* and many strains of *B. proteus*.

Q *But if I use KANTREX Injection, won't that help make bacteria resistant to it also?*

Next page, please

Q *But if I use KANTREX Injection, won't that help make bacteria resistant to it also?*

A A very good question, but it is reassuring to note that in almost two years of clinical use of KANTREX for the treatment of infections for which it is recommended, the emergence of KANTREX-resistant bacterial populations has not been a problem.

Q *My impression is that KANTREX is just another neomycin. Isn't that so?*

A Indeed not. The only thing KANTREX and neomycin have in common is a similar antimicrobial spectrum. Otherwise, they're very different: they have different chemical structures; the toxicity of KANTREX is "much less than that of neomycin"¹⁴; and clinically, KANTREX Injection is practical for systemic administration routinely, while neomycin is not.

Q *You mean that KANTREX Injection doesn't have the nephrotoxicity of neomycin?*

A Precisely. It's true that when KANTREX Injection is used, urinary casts — even slight albuminuria or microscopic hematuria — may appear, especially in poorly hydrated patients, but this does not reflect any progressive damage to the kidneys. These signs promptly disappear on adequate hydration or termination of therapy.

Q *Then why do you recommend reduced dosage in patients with renal impairment?*

A Because renal impairment causes an excessive accumulation of KANTREX in the blood and tissues, when usual doses are administered. Since KANTREX Injection is excreted entirely by the kidneys, renal impairment leads

to unnecessarily high and prolonged blood levels; and such excessive concentrations increase the risk of ototoxicity.

Q *Is that why we see reports of patients developing hearing loss during KANTREX Injection therapy?*

A Yes. A study of the few reported cases in which patients have suffered impaired hearing will show that in every instance they had pre-existing or concurrent renal impairment, yet received usual or excessive doses of KANTREX Injection. Dosage recommendations for KANTREX Injection emphasize that in patients with renal dysfunction, adequate serum levels can be achieved with a fraction of the dose suggested for patients with normal kidney function — with minimal risk of ototoxicity.

Q *Since urinary tract infections are often accompanied by renal impairment, does that mean I shouldn't use KANTREX Injection in such conditions?*

A Not at all. With proper precautions, KANTREX Injection is an excellent drug for the treatment of urinary tract infections, especially those due to *Proteus*, *A. aerogenes* and *E. coli*, even when renal impairment is present.

Q *What are the "proper precautions" in a patient with impaired renal function?*

A The package literature covers them in detail. First, the daily dose should be reduced in such a patient. Then, if he is going to receive KANTREX Injection for 7 days or more, a pre-treatment audiogram should be done, and it should be repeated at appropriate intervals during therapy. If tinnitus or subjective hearing loss develops, or if followup audiograms show significant loss of high frequency response, KANTREX therapy should be discontinued. However, therapy for 7 days or more

is seldom required because the clinical response to KANTREX Injection is so rapid.

Q *Why do you put so much emphasis on KANTREX's "rapid action"? Every antibiotic I've heard about is supposed to be "rapid acting."*

A There is such an abundance of clinical evidence about "rapid acting" that it takes KANTREX Injection out of the "supposed-to" class.^{1,2,3,7,8,9,11,15,16,19,21,22,26,29,32,33} Remember, the effectiveness of KANTREX Injection therapy can usually be appraised in 24 to 36 hours. That's definite evidence of rapid action. In fact, one group of investigators reported that "the rapidity with which bacteria are killed by this agent is reflected by the promptness of the clinical response."²⁹

Q *Does KANTREX Injection cause blood dyscrasias?*

A In extensive clinical and toxicity studies by numerous investigators, as well as almost two years of general use, not a single instance of such toxicity has been reported.

Q *Can I administer KANTREX Injection in any other way than by the intramuscular route?*

A Yes. While it's usually given intramuscularly, other routes are practicable: intravenous, intraperitoneal, by aerosol, and as an irrigating solution. Complete instructions are included in the package insert.

Q *So you think I ought to use KANTREX Injection as my first choice antibiotic in staph and gram-negative infections?*

A Yes — because all evidence to date indicates that it is bactericidal against a wide range of organisms...rapid acting...does not encourage development of bacterial resistance...is well tolerated in specified dosage...and has not caused any blood dyscrasias.

KANTREX® CAPSULES

*for local gastrointestinal therapy...
not for systemic infections*

Q *Why can't I use KANTREX Capsules for systemic medication?*

A Because there is only negligible absorption of KANTREX from the gastrointestinal tract.^{3,5,6,8,28,34} Thus, capsules cannot provide effective blood levels.

Q *Then what are KANTREX Capsules used for?*

A Preoperative bowel sterilization, and local treatment of intestinal infections due to kanamycin-sensitive organisms.

Q *I've been using neomycin for preoperative bowel sterilization. Why should I switch to KANTREX Capsules?*

A Because KANTREX has been rated as "superior to neomycin" for this purpose.⁶ It provides rapid and satisfactory control of coliforms, clostridia, staphylococci and streptococci; yeasts do not proliferate; stool concentrations of the drug are exceptionally high; and nausea, vomiting or intestinal irritation have not been observed.^{5,6}

Q *What advantages do KANTREX Capsules offer me in the treatment of intestinal infections?*

A A high degree of effectiveness against most of the pathogens responsible for such infections: *Salmonella*, *Shigella*, *Staph. aureus*, *E. coli* and *Endamoeba histolytica*. Moreover, their use has been "remarkably free of any side effects."³¹

KANTREX®

INJECTION KANAMYCIN SULFATE INJECTION

INDICATIONS

Infections due to kanamycin-sensitive organisms, particularly staph or "gram-negatives": genito-urinary infections; skin, soft tissue and post-surgical infections; respiratory tract infections; septicemia and bacteremia; osteomyelitis and periostitis.

DOSAGE: INTRAMUSCULAR ROUTE

Recommended daily dose is 15 mg. per kg. of body weight, in 2 to 4 divided doses.

For intramuscular administration, KANTREX Injection should be injected deeply into the upper outer quadrant of the gluteal muscle.

TOXICITY

When the recommended precautions are followed, the incidence of toxic reactions to KANTREX is low. In well hydrated patients under 45 years of age with normal kidney function, receiving a total dose of 20 Gm. or less of KANTREX, the risk of ototoxic reactions is negligible.

In patients with renal disease and impaired renal function, the daily dose of KANTREX should be reduced in proportion to the degree of impairment to avoid accumulation of the drug in serum and tissues, thus minimizing the possibility of ototoxicity. In such patients, if therapy is expected to last 7 days or more, audiograms should be obtained prior to and during treatment. KANTREX therapy should be stopped if tinnitus or subjective hearing loss develops, or if audiograms show significant loss of high frequency response.

OTHER ROUTES OF ADMINISTRATION

KANTREX should be used by intravenous infusion only when the intramuscular route is impracticable. KANTREX can also be employed for intraperitoneal use, aerosol treatment, and as an irrigating solution. See package insert for directions.

PRECAUTIONS

Use of antibiotics may occasionally result in overgrowth of non-sensitive organisms. If superinfection appears during therapy, appropriate measures should be taken.

SUPPLY

Available in rubber-capped vials as a ready-to-use sterile aqueous solution in two concentrations (stable at room temperature indefinitely):

KANTREX Injection, 0.5 Gm. kanamycin (as sulfate) in 2 ml. volume.

KANTREX Injection, 1.0 Gm. kanamycin (as sulfate) in 3 ml. volume.

CAPSULES

(for local gastrointestinal therapy; not for systemic medication)

INDICATIONS AND DOSAGE

For preoperative bowel sterilization: 1.0 Gm. (2 capsules) every hour for 4 hours, followed by 1.0 Gm. (2 capsules) every 6 hours for 36 to 72 hours.

For intestinal infections: Adults: 3.0 to 4.0 Gm. (6 to 8 capsules) per day in divided doses for 5 to 7 days. Infants and children: 50 mg. per kg. per day in 4 to 6 divided doses for 5 to 7 days.

PRECAUTION

Preoperative use of KANTREX Capsules is contraindicated in the presence of intestinal obstruction. Although only negligible amounts of KANTREX are absorbed through intact intestinal mucosa, the possibility of increased absorption from ulcerated or denuded areas should be considered.

SUPPLY

KANTREX Capsules, 0.5 Gm. kanamycin (as sulfate), bottles of 20 and 100.

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in respiratory infections...the new alternative

MADRIBON

The increasing incidence of resistant pathogens, often complicated by sensitization to previously used anti-infective agents, creates an acute need for a new alternative to control infection in today's patient.

Backed by the fastest growing bibliography of any anti-infective agent, Madribon is already widely established as the new alternative because (1) it quickly controls the infection—in more than 90% of reported cases, including some due to resistant strains; (2) it is safe—less than 2% side effects, generally of a mild nature; (3) it is economical.

Dosage: MADRIBON TABLETS (0.5 Gm) and SUSPENSION (0.25 Gm/teasp.)

For severe infections:

| | Tablets | Suspension (teasp.) | |
|--------------------|---------|---------------------|---|
| initially q. 24 h. | | initially q. 24 h. | |
| ADULTS | 4 | 2 | 8 |
| | | | 4 |

CHILDREN:

| | | | | |
|---------|---|-----|---|---|
| 20 lbs. | 1 | 1/2 | 2 | 1 |
| 40 lbs. | 2 | 1 | 4 | 2 |
| 80 lbs. | 4 | 2 | 8 | 4 |

Continue therapy for 5 to 7 days or until patient is asymptomatic for at least 48 hours.

For mild infections: Less severe infections will usually respond to one-half the above dosage.

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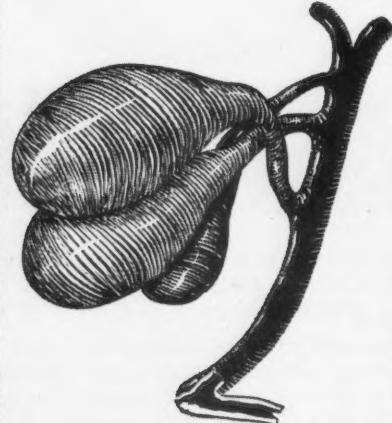
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Source: Skilboe, B.: Am. J. Clin. Path. 30:252, 1958.



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...dehydrocholic acid...does considerably increase the volume output of a bile of relatively high water content and low viscosity. This drug is therefore a good 'flusher,' and is effectively used in treating both the chronic unoperated patient and the patient who has a T-tube drainage of an infected common bile duct.¹

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...DECHOLIN/Belladonna in a dosage of one tablet t.i.d. for a period of two to three months may prove helpful in relieving postoperative symptoms, aiding the digestion, and facilitating elimination.²

(1) Beckman, H.: Drugs: Their Nature, Action and Use, Philadelphia, W. B. Saunders Company, 1958, p. 425.
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Available: DECHOLIN Tablets: (dehydrocholic acid, AMES) 3 1/4 gr. (250 mg.). Bottles of 100, 500 and 1,000; drums of 5,000. DECHOLIN with Belladonna Tablets: (dehydrocholic acid, AMES) 3 1/4 gr. (250 mg.) and extract of belladonna 1/6 gr. (10 mg.). Bottles of 100 and 500.



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NIAMID gives the depressed elderly person a new sense of well-being. The family will notice a sunnier outlook, an alert interest in group activities, a renewed awareness of personal appearance, and a return of appetite. Your patient will be more cooperative and less demanding.

You can expect to see the same excellent response to **NIAMID** in a wide variety of depressive syndromes—acute or chronic, mild or severe, whether associated with long-standing or incurable illness, or masquerading as organic disease.

NIAMID side effects are infrequent and mild, and often lessened or eliminated by a reduction in dosage. **NIAMID** has not been reported to cause jaundice, and significant hypotensive effects have rarely been noted.

DOSAGE: Start with 75 mg. daily in single or divided doses, and adjust according to patient response. **NIAMID** acts slowly, without rapid jarring of physical or mental processes. Some patients respond to **NIAMID** within a few days, but for full therapeutic benefit, most require at least two weeks. **NIAMID** is available as 25 mg. (pink) and 100 mg. (orange) scored tablets.

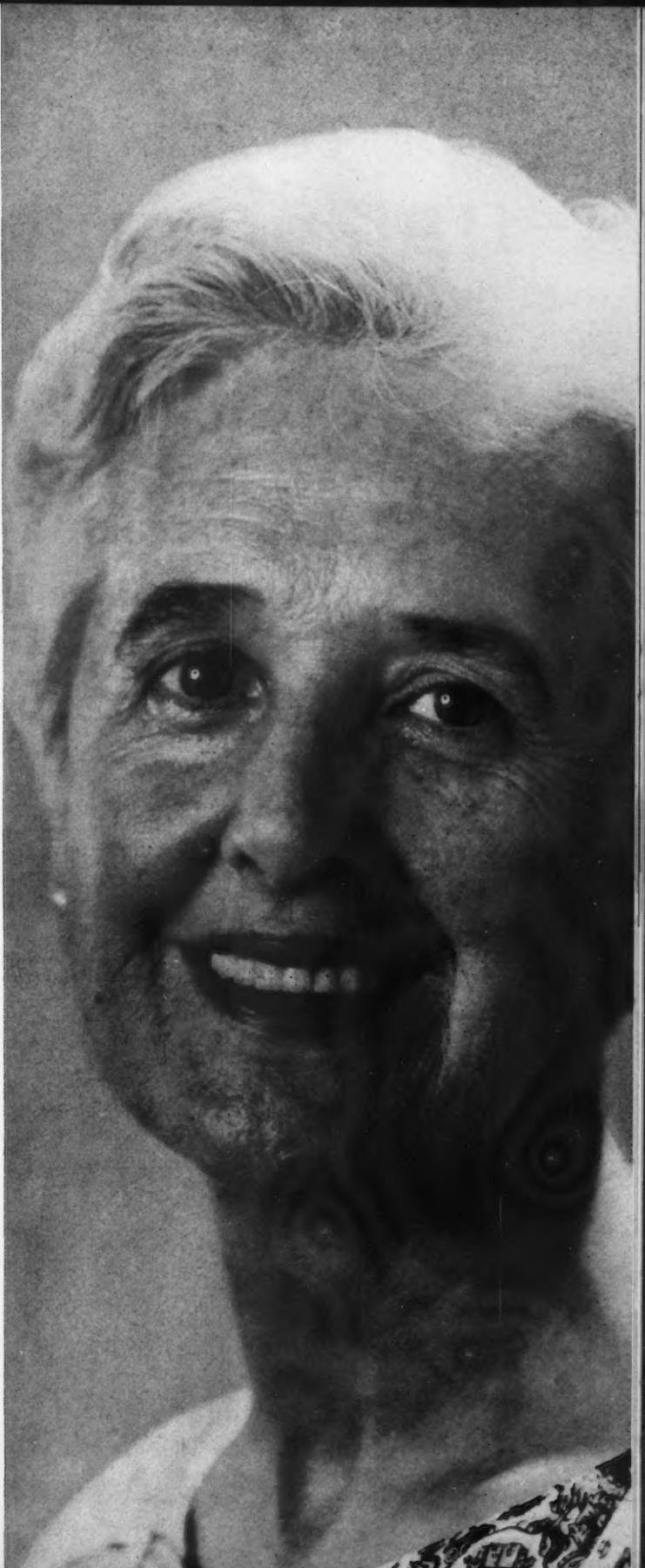
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*Complete references and a Professional Information Booklet giving detailed information on **NIAMID** are available on request from the Medical Department, Pfizer Laboratories, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.*

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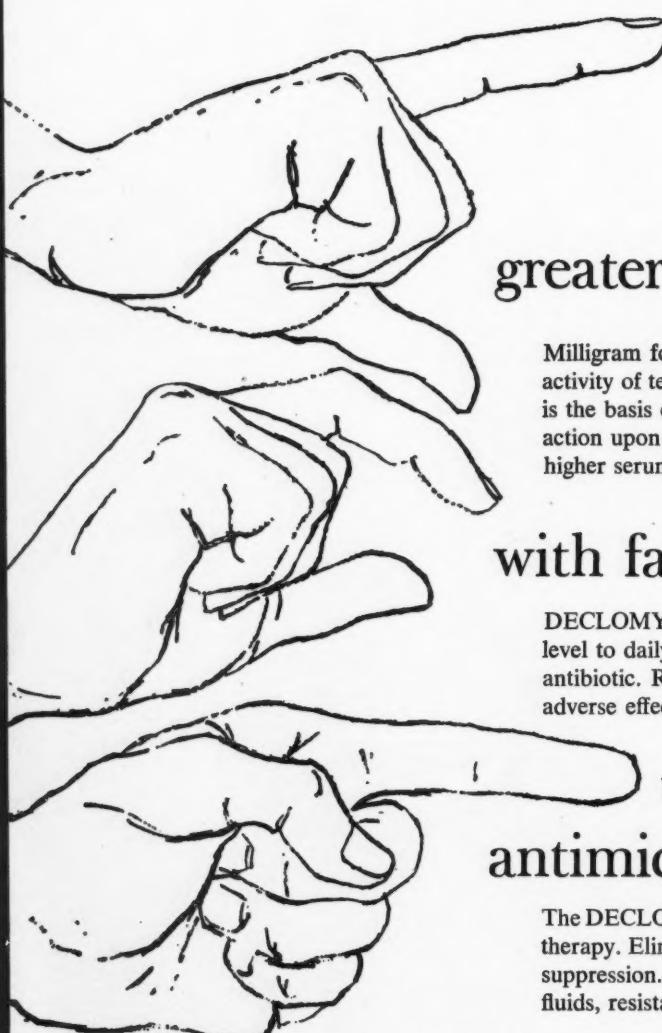
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DECLOMYCIN demonstrates the highest ratio of prolonged activity level to daily milligram intake of any known broad-spectrum antibiotic. Reduction of antibiotic intake reduces likelihood of adverse effect on intestinal mucosa or interaction with contents.

unrelenting peak
antimicrobial attack

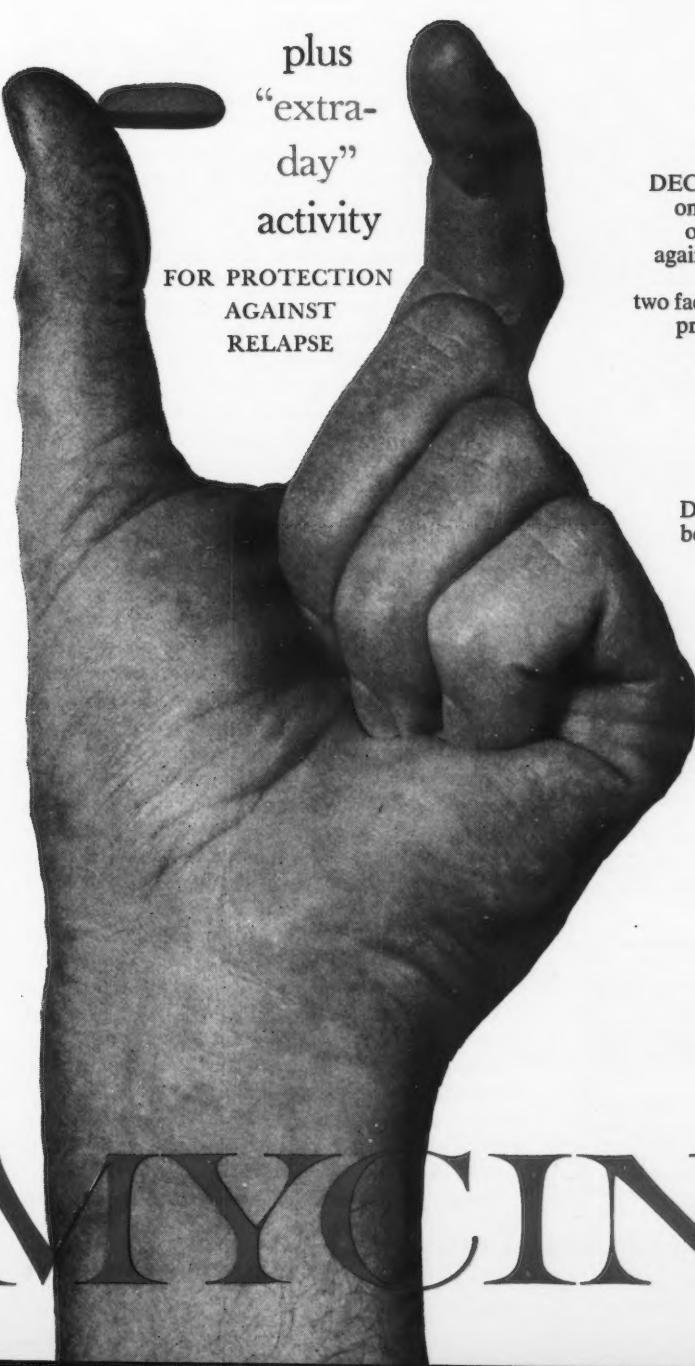
The DECLOMYCIN high activity level is uniquely constant throughout therapy. Eliminates peak-and-valley fluctuation, favoring continuous suppression. Achieved through remarkably greater stability in body fluids, resistance to degradation and a low rate of renal clearance.

*Hirsch, H. A., and Finland, M.:
New England J. Med. 260:1099
(May 28) 1959.

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DECLOMYCIN maintains activity for one to two days after discontinuation of dosage. Features unusual security against resurgence of primary infection or secondary bacterial invasion—two factors often resembling a "resistance problem"—enhancing the traditional advantages of tetracycline . . . for greater physician-patient benefit in the distinctive dry-filled, duotone capsule

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BOOKS RECEIVED

(Continued from Page 6)

HEROIC SANCTITY AND INSANITY—An Introduction to the Spiritual Life and Mental Hygiene. Thomas Verner Moore, Carthusian; formerly Head of the Department of Psychology and Psychiatry and Director of the Child Guidance Center at the Catholic University of America, Washington, D. C. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, New York, 1959. 243 pages, \$5.00.

JEWISH MEDICAL ETHICS—A Comparative and Historical Study of the Jewish Religious Attitude to Medicine and its Practice—Rabbi Dr. Immanuel Jakobovits, Philosophical Library, Inc., 15 East 40th Street, New York, New York, 1959. 381 pages, \$6.00.

MEGALOBLASTIC ANEMIAS, THE—Modern Medical Monographs—18—Victor Herbert, M.D., Research Assistant in Hematology, The Mount Sinai Hospital, New York. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, New York, 1959. 162 pages, \$6.00.

METABOLIC CARE OF THE SURGICAL PATIENT—Francis D. Moore, M.D., Moseley Professor of Surgery, Harvard Medical School; Surgeon-in-Chief, Peter Bent Brigham Hospital. Illustrated by Mildred Codding, A.B., M.A., Surgical Artist, Department of Surgery, Harvard Medical School, Peter Bent Brigham Hospital, W. B. Saunders Company, Philadelphia, Pennsylvania, 1959. 1011 pages, \$20.00.

OBSERVATIONS ON DIRECT ANALYSIS—The Therapeutic Technique of Dr. John N. Rosen. Morris W. Brody, M.D.; with forewords by John N. Rosen, M.D., and O. Spurgeon English, M.D. Vantage Press, Inc., 120 W. 31st Street, New York 1, New York, 1959. 104 pages, \$2.95.

PEDIATRIC PATHOLOGY—Daniel Stowens, M.D., Pathologist, Children's Hospital Society of Los Angeles; Associate Professor of Pathology, University of Southern California; Diplomate, American Board of Pediatrics and Pathology. The Williams & Wilkins Company, Baltimore, Maryland, 1959. 676 pages, \$20.00.

PHYSICIAN AND THE LAW—2nd Edition—Rowland H. Long, Member Massachusetts and New York Bars; Assistant Professor in Forensic Medicine, New York University Post-Graduate Medical School; with a foreword by Milton Helpern, M.D., Chief Medical Examiner, New York City. Appleton-Century-Crofts, Inc., 35 West 32nd St., New York 1, New York, 1959. 302 pages, \$5.95.

PLANNING HOMES FOR THE AGED—edited by Geneva Mathisen, Executive Secretary, National Committee on the Aging, National Social Welfare Assembly; and Edward H. Noakes, Edward H. Noakes & Associates, Architects. F. W. Dodge Corporation, 119 West 40th Street, New York 18, New York, 1959. 119 pages, \$12.75.

PREPARATION OF MEDICAL LITERATURE, THE—Louise Montgomery Cross, M.A.—with a Chapter on Charts and Graphs by Shirley Baty, Medical Illustrator. The Memorial Center for Cancer and Allied Diseases. J. B. Lippincott Company, Philadelphia, Pennsylvania, 1959. 451 pages, \$10.00.

PSYCHOPATHY—A Comparative Analysis of Clinical Pictures—Carl Frankenstein, Ph.D., Associate Professor of Special Education, The Hebrew University, Jerusalem. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, New York, 1959. 198 pages, \$6.75.

SYMPOSIUM ON GLAUCOMA—Transactions of New Orleans Academy of Ophthalmology, 1957. Editor, William B. Clark, M.D., F.A.C.S.; Diplomate, American Board of Ophthalmology; Professor of Clinical Ophthalmology, Tulane University School of Medicine, New Orleans, Louisiana; Associate Editor, Joe M. Carmichael, M.S.J. The C. V. Mosby Co., 3207 Washington Boulevard, St. Louis 3, Missouri, 1959. 314 pages, with 99 figures, \$13.50.

YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—1959-1960 Year Book Series. Edited by J. P. Greenhill, B.S., M.D., F.A.C.S., F.I.C.S. (Honorary), Professor of Gynecology, Cook County Graduate School of Medicine; author of *Office Gynecology*, *Surgical Gynecology*, *Obstetrics and Gynecology in General Practice*. Year Book Publishers, Inc., 200 E. Illinois Street, Chicago 11, Illinois, 1959. 573 pages, \$8.00.

Outlook Markedly Improved For Stroke Patients

An estimated two million persons who have suffered strokes are alive today, and the outlook for stroke patients has "markedly improved" in the past five years, a New York heart specialist has reported.

In an interview reported in the November *Today's Health*, published by the American Medical Association, Dr. Irving S. Wright, Cornell University Medical College, New York, said that even in 1954, "the approach of the medical profession was one of hopelessness. It was just too bad but the stroke patient was stuck with what he had."

Now, he added, "a great catalytic movement is taking place." Hundreds of researchers are working in the field of strokes, and both knowledge and treatment of stroke conditions have advanced a great deal.

Dr. Wright said that figures from a 10-year study by Columbia and Cornell Universities and Bellevue Hospital on treatment of the acute phase of first strokes, "suggest that for survival alone there's an improvement of about one-third by using anticoagulants in treatment of thrombosis."

The figures, he added, are almost the same as those from a study of the treatment of coronary thrombosis with anticoagulants made under the auspices of the American Heart Association.

Tracing the development of strokes, Dr. Wright pointed out that they are caused when a blood vessel supplying the brain becomes clogged, usually with a blood clot. Innumerable combinations of brain and body damage can occur. Depending upon which area of the brain is affected, a person may have a stroke without knowing it. When blood from a clot leaks into the brain area, a hemorrhage occurs.

Men, especially those with hardening of the arteries, seem to develop stroke symptoms earlier than women, he added. The sex difference tends to even up to some degree after menopause because women lose protection from their hormones.

"Anticoagulants will be much more widely used, as with heart disease," predicted Dr. Wright. "I think it can be said that the risk of a second stroke can be reduced markedly by keeping the patient on anticoagulants, provided that the original stroke was due either to an embolism coming from the heart or to a clot forming within the brain."

Anticoagulants should never be given to a patient with a hemorrhagic or "bleeding" stroke, he cautioned.

Dr. Wright made these other observations about strokes:

Rehabilitation: "Workers are most enthusiastic about their ability to get the patient to utilize muscles and nerves which are intact. Further studies are underway. But the patient must still know he is wanted in order to have the will to get well."

Stress: "Some physicians have taken the position

(Continued on Page 96)

in peptic ulcer...

**KEEPS THE MIND
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direct antispasmodic action plus control of anxiety and tension

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*2 Milpath forms
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MILPATH-400—Yellow, scored tablets of 400 mg. meprobamate and 25 mg. tridihexethyl chloride (formerly supplied as the iodide). Bottle of 50.

DOSAGE: 1 tablet t.i.d. at mealtime and 2 at bedtime.

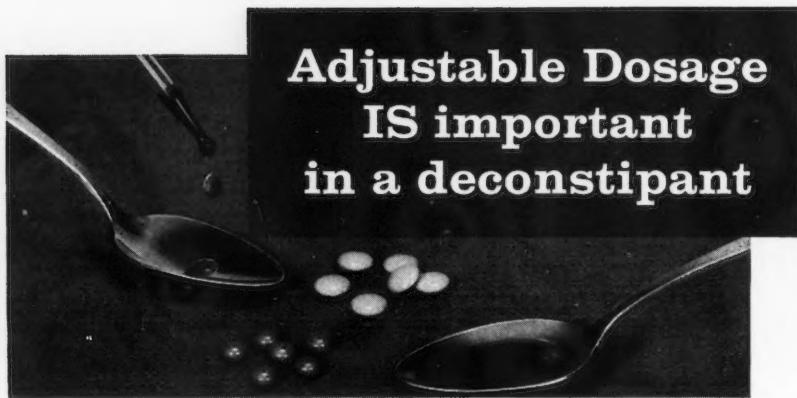
MILPATH-200—Yellow, coated tablets of 200 mg. meprobamate and 25 mg. tridihexethyl chloride. Bottle of 50.

DOSAGE: 1 or 2 tablets t.i.d. at mealtime and 2 at bedtime.

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TABLETS MILD (pink) *for hypersensitives and children (6 to 12 yrs.).*

Each tablet contains 37.5 mg. danthron, 12.5 mg. calcium pantothenate. Dose — 1 tablet to be taken immediately after the evening meal.



LIQUID . . . *for geriatric, pediatric, and "liquid only" patients.*

Each teaspoonful contains 37.5 mg. danthron and 12.5 mg. calcium pantothenate. Dose — 1 teaspoonful or fraction thereof, according to age and condition, immediately after the evening meal.



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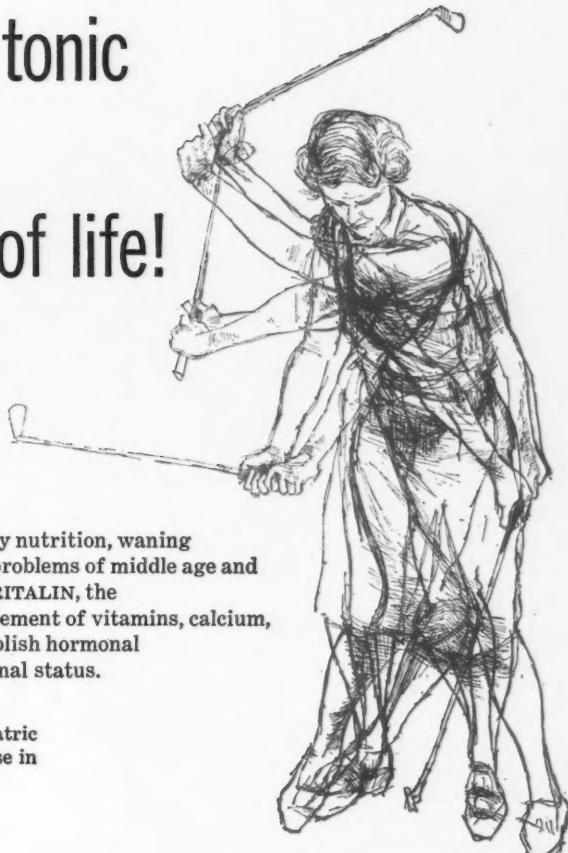


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"We found Ritonic to be a safe, effective geriatric supplement . . ."¹ "Patients reported an increase in alertness, vitality and sense of well being."²



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| methyltestosterone | 1.25 mg. |
| ethynodiol | 5 micrograms |
| thiamin (vitamin B ₁) | 5 mg. |
| riboflavin (vitamin B ₂) | 1 mg. |
| pyridoxin (vitamin B ₆) | 2 mg. |
| vitamin B ₁₂ activity | 2 micrograms |
| nicotinamide | 25 mg. |
| dicalcium phosphate | 250 mg. |



Dosage: One Ritonic Capsule in mid-morning and one in mid-afternoon.

Supplied: Ritonic CAPSULES; bottles of 100.

References: 1. Natenson, A. L.: J. Am. Geriatrics Soc. 6:534 (July) 1958.
2. Bachrach, S.: To be published.

RITALIN® hydrochloride (methylphenidate hydrochloride CIBA)

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control the tension—treat the trauma



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*greater flexibility in the control of tension, hypermotility
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PATHILON (25 mg.)—anticholinergic noted for its peripheral, atropine-like action, with few side effects.

The clinical advantages of **PATHIBAMATE** have been confirmed by nearly two years' experience in the treatment of duodenal ulcer; gastric ulcer; intestinal colic; spastic and irritable colon; ileitis; esophageal spasm; anxiety neurosis with gastrointestinal symptoms and gastric hypermotility.

Because of individual variation in the intensity of stimuli in gastrointestinal disorders, adequate dosage for optimum control may be expected to vary as well. The dosage strengths of **PATHIBAMATE-400** and **PATHIBAMATE-200** facilitate individualization of treatment in respect to both the degree of tension and associated G.I. sequelae, as well as the response of different patients to the component drugs.

Supplied: **PATHIBAMATE-400**—Each tablet (yellow, 1/2-scored) contains

meprobamate, 400 mg.; PATHILON tridihexethyl chloride, 25 mg.

PATHIBAMATE-200—Each tablet (yellow, coated) contains mep-

robamate, 200 mg.; PATHILON tridihexethyl chloride, 25 mg.

Administration and Dosage: **PATHIBAMATE-400**—1 tablet three times a day at mealtime and 2 tablets at bedtime.

PATHIBAMATE-200—1 or 2 tablets three times a day at mealtime and 2 tablets at bedtime.

Adjust to patient response.

Contraindications: glaucoma; pyloric obstruction, and obstruction of the urinary bladder neck.



LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Bowen's Disease and Its Relationship to Systemic Cancer

The characteristic finding in the disease described by Bowen is a chronic solitary lesion composed of lenticular papules. The histological picture of atypical epithelial proliferation also occurs in multiple, non-elevated, scaly or crusted plaques. Specimens for study were obtained from 35 patients after death and were compared with similar materials from 35 patients with senile keratosis, 35 with squamous-cell carcinoma of the skin, 139 with exfoliative dermatitis, and many other patients with other cutaneous diseases. The average age of onset for the 35 patients with Bowen's disease was 54 years; the duration of the lesion from onset to surgery ranged from 5 months to 30 years. The lesions ranged in diameter from 0.7 to 13 cm. with a median of 1.9 cm. They usually appeared as erythematous, pigmented, crusty, scaly fissured, keratotic plaques. Their configuration varied from round plaques, sharply demarcated from the surrounding tissue, to an irregular, polycyclic, lenticular pattern. They were firm, indurated, rough, and granular to palpation. The first lesion surgically removed was most frequently diagnosed as squamous-cell or basal-cell carcinoma, and only once was the diagnosis of Bowen's disease made at the first examination of a specimen. Surgi-

cal excision of the lesion is the recommended treatment; the need for sufficiently wide excision was indicated by the fact that in four patients the lesions were clearly invasive and in two others widespread metastases appeared. The evidence of an association of Bowen's disease with internal and cutaneous cancer was convincing, and it is suggested that the lesions are cutaneous manifestations of a systemic carcinogenic disease process.

Outlook Markedly Improved For Stroke Patients

(Continued from Page 90)

that heart attacks, like strokes, are largely produced by . . . stress in our civilization. I doubt this. The evidence for this is poor and there are many other factors, such as hormones or diet, for which the evidence is far better."

Diet: "I don't think we're yet in a position to advise a drastic change in our national diet." However, obese persons or those with high blood cholesterol should keep their fat and cholesterol intake down.

Exercise: "Physical exercise within reason is good for people. The evidence suggests that this does them no harm and may even help to protect them against heart attacks and strokes. After such attacks, of course, activity has to be well controlled."

*Abstract from A.M.A. Arch. Dermat., 80:133-159, Aug. 1959.
James H. Graham and Elson B. Helwig.

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| North Coast Counties Institute . . . Program by C.M.E. | |
| ★ RIVIERA HOTEL, PALM SPRINGS | APRIL 21-22, 1960 |
| Southern Counties Institute . . . Program by Stanford | |
| ★ AHWAHNEE HOTEL, YOSEMITE | APRIL 28-29, 1960 |
| San Joaquin Valley Counties Institute . . . Program by U.S.C. | |
| ★ TAHOE TAVERN, LAKE TAHOE | JULY 1-2, 1960 |
| Sacramento Valley Counties Institute . . . Program by U.C.L.A. | |

MAKE HOTEL RESERVATIONS EARLY—WRITE DIRECTLY TO HOTEL

Fee: \$15.00 Each Institute



basic in exchange

basic in
cold control



CORICIDIN® Tablets

formula

| | |
|--------------------------------|----------------|
| chlorprophenpyridamine maleate | ... 2 mg. |
| aspirin | 0.23 Gm. |
| phenacetin | 0.16 Gm. |
| caffeine | 30 mg. |



L-089

SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY

The Nutrient Value of LOW-PRICED CUTS of Meat

It is a common misconception that the higher-priced cuts of meat are "more nourishing" than the lower-priced cuts.

The fact is that all lean meats—beef, veal, lamb, and pork—supply approximately the same quantity of high efficiency protein, as well as a significant complement of B vitamins and essential minerals. One low-priced meat, lean pork, exceeds all other high protein foods in its content of thiamine.

Each of the low-priced cuts of lean meat listed below is approximately equivalent to the most expensive cuts of lean meat in content of protein, B vitamins, and minerals such as iron, potassium and phosphorus.

BEEF

Steaks: chuck, shoulder, flank, round, rump.

Pot roasts: chuck ribs, cross arm clod, round, rump.

Stews: neck, plate, brisket, flank, shank, heel of round.

LAMB, PORK AND VEAL

Chops, roasts, pot roasts and stews made from shoulder, breast, and shank meat.

Dishes prepared with these low-priced cuts of meat are among the most delectable. Furthermore, meat, because of its outstanding nutritional value, is an ideal food to recommend in high protein diets in both health and disease without burdening the food dollar.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

American Meat Institute
Main Office, Chicago...Members Throughout the United States

An emotionally balanced patient. Thanks to your treatment and the help of Deprol, her depression is relieved and her anxiety and tension calmed. She eats well, sleeps well, and can return to her normal activities.

Lifts depression...as it calms anxiety!

Deprol helps balance the mood by lifting depression as it calms related anxiety

No "seesaw" effect of amphetamine-barbiturates and energizers

While amphetamines and energizers may stimulate the patient — *they often aggravate anxiety and tension*. And although amphetamine-barbiturate combinations may counteract excessive stimulation — *they often deepen depression*.

In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety—both at the same time.

Safer choice of medication than untested drugs

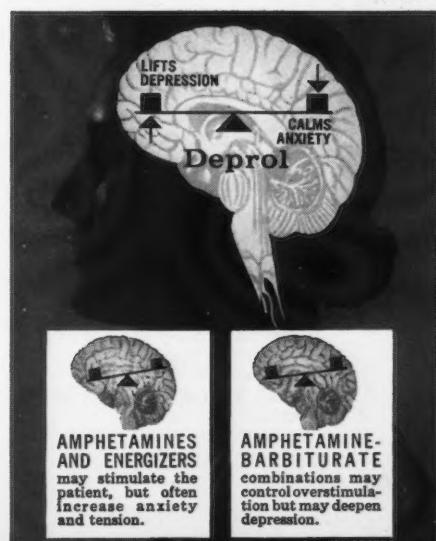
Deprol does not produce hypotension, liver damage, psychotic reactions or changes in sexual function.

Deprol®

 **WALLACE LABORATORIES**
New Brunswick, N. J.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.
Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.





*in taste-tempting
cherry flavor*

Average dosage, 1 teaspoonful
(5 cc.) contains:

| | |
|---|----------|
| I-Lysine HCl | 300 mg. |
| Vitamin B ₁₂ Crystalline | 25 mcgm. |
| Thiamine HCl (B ₁) | 10 mg. |
| Pyridoxine HCl (B ₆) | 5 mg. |
| Ferric Pyrophosphate (Soluble) | 250 mg. |
| Iron (as Ferric Pyrophosphate) | 30 mg. |
| Sorbitol | 3.5 Gm. |
| Alcohol | .75% |

Bottles of 4 and 16 fl. oz.

**promote
protein uptake**

with the
potentiating effect
of I-Lysine on
low-grade
protein foods



LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Nothing is Quicker*

Nothing is more Effective*

In Asthma

PREMICRONIZED FOR
OPTIMAL
EFFICACY

* Spirograms show
22½% improvement in vital
capacity within moments after
inhalation of Medihaler medication.
Recorded in the Lung Station (Tufts)
at the Boston City Hospital,
Maurice S. Segal, M.D., Director.

Available
with either
isoproterenol
or epinephrine

Automatically measured-dose
aerosol medications.

Nonbreakable...Shatterproof
Spillproof...Leakproof

Isoproterenol sulfate, 2.0 mg. per cc., suspended
in inert, nontoxic aerosol vehicle. Contains no
alcohol. Each measured dose contains 0.06 mg.
isoproterenol.

Medihaler-ISO®

Epinephrine bitartrate, 7.0 mg. per cc., sus-
pended in inert, nontoxic aerosol vehicle. Con-
tains no alcohol. Each measured dose contains
0.15 mg. epinephrine.

Medihaler-EPI®

NOTABLY WELL TOLERATED AND EFFECTIVE FOR CHILDREN, TOO

Riker

Northridge, Calif.

Modify or Prevent Measles reduce the hazard of complications



Polio IMMUNE GLOBULIN

Cutter gamma globulin (human)

MODIFIES—permits a mild attack followed by natural immunity

PREVENTS—confers passive immunity for about 3 to 4 weeks

CONCENTRATED—2 cc. is equivalent to 40 cc. normal immune serum derived from adult venous blood

Also recommended for prevention of infectious hepatitis, passive immunity against paralytic poliomyelitis, may be useful for passive immunity against maternal rubella, and as an adjunct to antibiotic therapy. May be beneficial for oral herpetiform lesions.*

Available in 2 cc. and 10 cc. vials

*Council on Drugs: J.A.M.A. 168:183 (Sept. 13) 1958.

Other fine Cutter Human Blood Fraction Products
Albumin (serum albumin), Hyparotin® (mumps immune globulin),
Hypertussis® (antitussive serum), Parenogen® (fibrinogen).



CUTTER LABORATORIES
Berkeley, California

